DOCUMENT RESUME

ED 132 309 CE 008 658

AUTHOR Thuemmel, William L.; And Others
TITLE Agribusiness and Natural Resources Education in Michigan. Job Competencies Needed. A Tabular Supplement to the Final Report.
INSTITUTION Michigan State Univ., East Lansing. Coll. of Agriculture and Natural Resources Education Inst.; Michigan State Univ., East Lansing. Dept. of Secondary Education and Curriculum.
SPONS AGENCY Michigan State Dept. of Education, Lansing. Vocational-Technical Education Service.
REPORT NO 3254-7125
PUB DATE Aug 75
NOTE 453p.; For related documents see CE 008 431 and CE 008 601

EDRS PRICE MF-$0.83 HC-$24.77 Plus Postage.
DESCRIPTORS *Agribusiness; *Agricultural Education; *Agricultural Skills; Educational Research; Job Analysis; Job Skills; *Natural Resources; Occupational Clusters; Occupational Information; Off Farm Agricultural Occupations; State Surveys; *Tables (Data); *Task Analysis; Vocational Agriculture
IDENTIFIERS Michigan

ABSTRACT

This manual contains a tabular report of the competency identification of job task analysis component (Part Two) of the research project entitled "Agribusiness and Natural Resources Education in Michigan: Employment Demand, Competencies Required, and Recommended Delivery Systems." The data is a tabular supplement to Chapter III of the final report. Lists of several hundred validated tasks or competencies are compiled into 100 tables providing information for use in developing performance objectives, instructional modules, or evaluation procedures related to 22 different occupations in the following four occupational clusters: agricultural production, environmental horticulture, farm implement repair, and biological-technical services in agriculture. Tables are arranged in seven different sets or series on the basis of similar information for each of the occupations/industries in the group. A complete analysis of one occupation can be made by use of one table of each series. (HD)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED132309

AGRIBUSINESS AND NATURAL RESOURCES EDUCATION IN MICHIGAN

Job Competencies Needed

A Tabular Supplement to the
Final Report

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

William L. Thuemmel, Project Director

With the Assistance of:

Raymond M. Clark

O. Donald Meaders

Agriculture and Natural Resources Education Institute
and
Department of Secondary Education and Curriculum
Michigan State University
East Lansing, Michigan 48824

August, 1975

This project was funded by the Michigan Department of Education, Vocational-Technical Education Service, under the title "Agribusiness and Natural Resources Education in Michigan: Employment Demand, Competencies Required, and Recommended Delivery Systems".

CE 008 658

PERSONNEL AND FACILITIES

Project Staff--Michigan State University

William L. Thuemmel, Assistant Professor, Agriculture and Natural Resources Institute and Department of Secondary Education and Curriculum--Project Director.

Raymond M. Clark, Professor Emeritus, Department of Secondary Education and Curriculum--Part Two (Competencies Needed) Coordinator.

O. Donald Meaders, Professor, Department of Secondary Education and Curriculum--Project Consultant.

Project Secretary

Mrs. Sandi L. Bauer

Project Advisory Council Members

A ten-member advisory council, consisting of Michigan agribusinessmen and educators, was formed with the cooperation of the Michigan Department of Education at the project outset. The council served as a useful source of consultation and assistance to the project staff throughout the duration of the study. The members of the council are listed in Appendix B.

Data Collection Field Coordinators

Fourteen teachers of vocational agriculture assisted in the collection of task analysis field data. The teachers were selected on the basis of proximity to the area of the state where employment in the selected occupational clusters is concentrated. The teachers are listed in Appendix C.

Office Space and Equipment

Office space and equipment used in the conduct of the project were provided by the Agriculture and Natural Resources Education Institute, Michigan State University. Computer services for processing the task analysis data were provided by the Ingham Intermediate School District Computer Center, Mason, Michigan.

ACKNOWLEDGMENTS

The opposite page contains the names of several individuals and organizations whose cooperative support has made this report possible. Some specific contributions are worthy of further appreciation and acknowledgment.

First, the project director expresses appreciation to his staff colleagues, Professors Raymond M. Clark and O. Donald Meaders, for their meaningful contributions and timely assistance to the task analysis portion of the project.

Second, grateful acknowledgment is expressed to Dr. Carroll H. "Jake" Wamhoff, Director, Agriculture and Natural Resources Education Institute, and his staff, for their helpful support in the administration of the project. Special recognition is also in order for Mrs. Sandi L. Bauer, who has so ably served as project secretary.

Third, appreciation is extended to the members of the Project Advisory Council and to the teachers of vocational agriculture who served well in their respective roles as advisors and interviewers. The cooperation of the businesses and producers that supplied the data and the assistance of the personnel at the Ingham Intermediate School District Computer Center, who processed the data, is acknowledged.

Finally, recognition is granted to the Vocational-Technical Education Service, Michigan Department of Education, and to the Department of Secondary Education and Curriculum, College of Education, Michigan State University for their support of the project.

ABSTRACT

Title of Project: Agribusiness and Natural Resources Education in Michigan: Job Competencies Needed; A Tabular Supplement to the Final Report.

Project Director:* William L. Thuemmel

Contracting Agency: Agriculture and Natural Resources Education Institute
and
Department of Secondary Education and Curriculum
Michigan State University

Beginning and Ending Dates: April 1, 1974 through August 31, 1975.

Purpose.--To provide a tabular report on the competencies needed for agricultural job entry upon graduation from high school as identified and validated by analyses of job tasks in the project entitled "Agribusiness and Natural Resources Education in Michigan: Manpower Needs, Competencies Needed, and School Program Characteristics".

Method.--A task analysis process was used to identify and validate job tasks in four major occupational areas: Agricultural Production, Environmental Horticulture, Farm Implement Repair, and the Biological-Technical Services in Agriculture. A total of 112 workers representing 21 different industries in the four occupational areas were involved in the validation of task items. The respondents indicated: (1) if the item represented an entry level skill or knowledge; and (2) the relative importance of each item for beginning workers. Job skills were "accepted" if 40 percent or more of the responses were in the affirmative. Job knowledges were evaluated in a similar manner, except the minimum acceptance level was

*With the assistance of: Raymond M. Clark and O. Donald Meaders.

lowered to 33 percent. Accepted job tasks or needed competencies within an occupational cluster which are common to all surveyed industries were identified as were those which are industry specific. The findings are reported in 100 tables.

Findings.--Analyses of job tasks resulted in the identification and validation of several hundred competencies (skills and knowledges) as being needed by entry level workers for employment in occupations within the four clusters studied. Considerable variation existed in the degree of specialization of workers in the same occupation. Within an occupational cluster there is evidence of much commonality of needed competencies among jobs together with a distinct need for specialization as preparation for work in a specific industry.

TABLE OF CONTENTS

PERSONNEL AND FACILITIES ii

ACKNOWLEDGMENTS iii

ABSTRACT iv

LIST OF TABLES vii

AN INTRODUCTION TO THE TABULAR SUPPLEMENT 1

SUPPLEMENTARY TABLES 5

APPENDICES

Appendix

A. Task Analysis Survey Instruments (Selected Pages Only) 231

B. List of Project Advisory Council Members 251

C. Teachers of Agriculture Who Assisted in Collection of Field Data 253

LIST OF TABLES

Table		Page
	SERIES A	
S-1	Respondents in Agricultural Production by Job Title, Years of Experience in Occupation, and Farming Industries in Which Engaged	8
S-2	Respondents in Environmental Horticulture by Job Title, Years of Experience in Occupation, and Industries in Which Engaged	10
S-3	Respondents in Farm Implement Repair by Job Title and Years of Experience in Occupation	11
S-4	Respondents in the Biological-Technical Services in Agriculture by Job Titles, Years of Experience in Occupation, and Industries in Which Engaged	12
	SERIES B	
S-5	Percentage Distribution of Job Skills Needed, or Not Needed by Respondents for Occupational Entry into Their Selected Industries in Agricultural Production	14
S-6	Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Agricultural Production	15
S-7	Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Environmental Horticulture	28
S-8	Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Environmental Horticulture	34
S-9	Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Farm Implement Repair	38
S-10	Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into Farm Implement Repair	44

Table		Page
S-11	Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Biological-Technical Services in Agriculture .	48
S-12	Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Biological-Technical Services in Agriculture	56
	SERIES C	
S-13	A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Agricultural Production	68
S-14	A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Environmental Horticulture	70
S-15	A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Farm Implement Repair	72
S-16	A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Biological-Technical Services in Agriculture	76
	SERIES D	
	Agricultural Production	
S-17	Job Skills Accepted as Entry Level for Employment in Dairy Farming.	80
S-18	Job Skills Accepted as Entry Level for Employment in Bush and/or Vine Fruit Farming	81
S-19	Job Skills Accepted as Entry Level for Employment in Tree Fruit Farming	82
S-20	Job Skills Accepted as Entry Level for Employment in Grain and/or Bean Farming	83
S-21	Job Skills Accepted as Entry Level for Employment in Livestock (Beef, Swine, Sheep) Farming	84
S-22	Job Skills Accepted as Entry Level for Employment in Poultry Farming	85
S-23	Job Skills Accepted as Entry Level for Employment in Vegetable, Beet, and/or Potato Farming	86

Table		Page
	Environmental Horticulture	
S-24	Job Skills Accepted as Entry Level for Employment in the Arboriculture Industry	87
S-25	Job Skills Accepted as Entry Level for Employment in the Bedding Plant Industry	88
S-26	Job Skills Accepted as Entry Level for Employment in the Garden Center Industry	89
S-27	Job Skills Accepted as Entry Level for Employment in the Groundskeeping and/or Park Industry	90
S-28	Job Skills Accepted as Entry Level for Employment in the Landscaping Industry	91
S-29	Job Skills Accepted as Entry Level for Employment in the Nursery Production Industry	92
S-30	Job Skills Accepted as Entry Level for Employment in the Turf and Sprinkler Industry	93
	Farm Implement Repair	
S-31	Job Skills Accepted as Entry Level for Employment in Farm Implement Repair	94
	Biological-Technical Services in Agriculture	
S-32	Job Skills Accepted as Entry Level for Employment in Agricultural Chemical Biological-Technical Services	96
S-33	Job Skills Accepted as Entry Level for Employment in Animal Laboratory Biological-Technical Services	97
S-34	Job Skills Accepted as Entry Level for Employment in Food Processing Biological-Technical Services	98
S-35	Job Skills Accepted as Entry Level for Employment in Grain, Feed, and/or Seed Biological-Technical Services	99
S-36	Job Skills Accepted as Entry Level for Employment in Waste Disposal Biological-Technical Services	100
S-37	Job Skills Accepted as Entry Level for Employment in Water Resources Biological-Technical Services	101

Table | Page

SERIES E

Agricultural Production

S-38 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Dairy Farming 104

S-39 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Bush and/or Vine Fruit Farming . 108

S-40 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Tree Fruit Farming 110

S-41 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Grain and/or Bean Farming 114

S-42 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Livestock (Beef, Swine, Sheep) Farming 118

S-43 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Poultry Farming 122

S-44 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Vegetable, Beet, and/or Potato Farming 124

Environmental Horticulture

S-45 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Arboriculture Industry . . . 126

S-46 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Bedding Plant Industry . . . 128

S-47 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Garden Center Industry . . . 129

S-48 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Groundskeeping and/or Park Industry 130

S-49 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Landscaping Industry 132

S-50 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Nursery Production Industry . 134

Table | Page

S-51 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Turf and Sprinkler Industry 136

Farm Implement Repair

S-52 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Farm Implement Repair 138

Biological-Technical Services in Agriculture

S-53 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Agricultural Chemical Biological-Technical Services 142

S-54 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Animal Laboratory Biological-Technical Services 144

S-55 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Food Processing Biological-Technical Services 145

S-56 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Grain, Feed, and/or Seed Biological-Technical Services 146

S-57 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Waste Disposal Biological-Technical Services 150

S-58 Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Water Resources Biological-Technical Services 151

SERIES F

Agricultural Production

S-59 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Dairy Farming 154

S-60 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Bush and/or Vine Fruit Farming 156

Table		Page
S-61	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Tree Fruit Farming	158
S-62	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Grain and/or Bean Farming	160
S-63	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Livestock (Beef, Swine, Sheep) Farming	162
S-64	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Poultry Farming	164
S-65	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Vegetable, Beet, and/or Potato Farming	166
	Environmental Horticulture	
S-66	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Arboriculture Industry	168
S-67	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Bedding Plant Industry	169
S-68	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Garden Center Industry	170
S-69	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Groundskeeping and/or Park Industry	172
S-70	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Landscaping Industry	174
S-71	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Nursery Production Industry	176
S-72	Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Turf and Sprinkler Industry	178

Table | Page

Farm Implement Repair

S-73 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Farm Implement Repair 180

Biological-Technical Services in Agriculture

S-74 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Agricultural Chemical Biological-Technical Services 182

S-75 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Animal Laboratory Biological-Technical Services 183

S-76 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Food Processing Biological-Technical Services . 184

S-77 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Grain, Feed, and/or Seed Biological-Technical Services 185

S-78 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Waste Disposal Biological-Technical Services . . 186

S-79 Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Water Resources Biological-Technical Services . 187

SERIES G

Agricultural Production

S-80 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Dairy Farming 190

S-81 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Bush and/or Vine Fruit Farming 191

Table		Page
S-82	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Tree Fruit Farming	192
S-83	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Grain and/or Bean Farming	193
S-84	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Livestock (Beef, Swine, Sheep) Farming	194
S-85	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Poultry Farming	195
S-86	Disposition of Job Skills Marked "Review with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Vegetable, Beet, and/or Potato Farming	196
Environmental Horticulture		
S-87	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Arboriculture Industry	197
S-88	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Bedding Plant Industry	198
S-89	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Garden Center Industry	200
S-90	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Groundskeeping and/or Park Industry	202
S-91	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Landscaping Industry	203
S-92	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Nursery Production Industry	204
S-93	Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Turf and Sprinkler Industry	205

Table | Page

Farm Implement Repair

S-94 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Farm Implement Repair 206

Biological-Technical Services in Agriculture

S-95 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Agricultural Chemical Biological-Technical Services 208

S-96 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Animal Laboratory Biological-Technical Services 212

S-97 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Food Processing Biological-Technical Services 216

S-98 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Grain, Feed, and/or Seed Biological-Technical Services . . 220

S-99 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Waste Disposal Biological-Technical Services 222

S-100 Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Water Resources Biological-Technical Services 226

AN INTRODUCTION TO THE TABULAR SUPPLEMENT

This report is a tabular presentation of the competency identification of job task analysis component (Part Two) of the research project entitled "Agribusiness and Natural Resources Education in Michigan: Employment Demand, Competencies Required, and Recommended Delivery Systems". The final report of the above project was prepared under the title "Agribusiness and Natural Resources in Michigan: Manpower Needs, Competencies Needed, and School Program Characteristics". The data contained herein are a tabular supplement to Chapter III, the narrative summary of the competencies needed component of the Final Report.[1]

Both the Tabular Supplement and Chapter III of the Final Report were prepared in response to the following research project objective: What are the competencies needed for entrance and advancement in the agriculturally related jobs? However, unlike the Final Report, this report contains the actual validated competencies needed for entrance and advancement in the agriculturally related jobs. Due to the large quantity of tabular data resulting from the analyses of job tasks and the technical purposes for which the data were intended, it was decided to present the tabular data under separate cover. Accordingly, the lists of several hundred validated tasks or competencies were compiled into 100 tables and are presented herein.

---

[1]Much of the content of both the Tabular Supplement and Chapter III of the Final Report was adapted from information which had been submitted to the project director by Dr. Raymond M. Clark in fulfillment of his responsibility as coordinator of the competencies needed component of the study.

The competencies needed or analyses of job tasks portion of the study included the four occupational clusters, and their component industries, as listed:

Cluster	Component Industries Surveyed
Agricultural Production	Dairy Farming Bush and/or Vine Fruit Farming Tree Fruit Farming Grain and/or Bean Farming Livestock (Beef, Swine, Sheep) Farming Poultry Farming Vegetable, Beet, and/or Potato Farming
Environmental Horticulture	Arboriculture Industry Bedding Plant Industry Garden Center Industry Groundskeeping and/or Park Industry Landscaping Industry Nursery Production Industry Turf and Sprinkler Industry
Farm Implement Repair	Farm Implement Repair
Biological-Technical Services in Agriculture	Agricultural Chemical Biological-Technical Services Animal Laboratory Biological-Technical Services Grain, Feed, and/or Seed Biological-Technical Services Food Processing Biological-Technical Services Waste Disposal Biological-Technical Services Water Resources Biological-Technical Services

Each of the occupations/industries was analyzed to identify the tasks (skills and knowledges) needed by high school graduates for entry into the occupation/industry. Job knowledges were associated with specific skills and, when accepted, were considered essential for proper performance of the job skill.

Returns from respondents were summarized by computer. Skills were marked "accept" when 40 percent of the workers who were interviewed indicated the item was entry level. Knowledges were marked "accept" when 30 percent of the respondents listed them as essential. Items not marked "accept" were marked "review" (rejected).

Reference to the List of Tables, pages vii-xv, will indicate that they are arranged in seven different sets or series (A-G) on the basis of similar information for each of the occupations/industries in the group. Sets of tables can be identified by similarity of titles. A complete analysis of one occupation will require the reader to use one table from each series.

A review of appropriate tables will enable the reader to identify the skills which were "accepted" by respondents for each of the occupations/industries listed above. Also, the associated knowledges may be identified and their "accept" or "review" status can be determined. In some cases workers (respondents) rejected knowledges which the experts had considered necessary for performance of the associated skill. When instructional modules based on the findings of this study are prepared, it is recommended that the associated knowledges that are needed for teaching the skill be included in the program. However, educators should review their instructional programs very carefully and omit those knowledges that are not essential for performance of the needed skills.

An examination of the appropriate tables will indicate the commonality of skill and knowledge items among occupations within a cluster. This will enable educators to identify and develop instructional modules which will be common to a larger group of students and to also identify modules needed

for students to prepare for a specific occupation/industry which they wish to enter.

One series of tables (Series F) lists the disposition of "accepted" job knowledges associated with job skills. In reviewing the tables in this series, the reader should keep in mind that it is desirable to include in the instructional program only those knowledges that are essential for acceptable performance of an entry level skill. In some cases many knowledges are marked "accept" but they are not associated with "accepted" skills. These should not be included in the instructional program. On the other hand, some of the tables (see Series B and E) reject all, or nearly all, knowledges. In these cases, it is likely that educators will reinstate some knowledges as they develop instructional modules.

Skills and associated knowledges which were rejected may be studied to determine if they should be included in instructional programs leading to advancement. It is felt that some of the items marked "review" represented skills and knowledges not commonly needed by beginning workers, but rather are needed for advancement in occupations within the industry.

By carefully examining the "accepted" skills and the associated knowledges for an occupation, the educator will be able to: (1) prepare performance objectives, with each one covering one or a group of skills and associated knowledges; (2) plan instructional modules needed for helping students to meet the objectives; and (3) prepare evaluation procedures to determine the performance of each individual student.

SUPPLEMENTARY TABLES

SERIES A

RESPONDENTS BY JOB TITLE, YEARS OF EXPERIENCE IN OCCUPATION, AND FARMING INDUSTRIES IN WHICH ENGAGED.

Table S-1.--Respondents in Agricultural Production by Job Title, Years of Experience in Occupation, and Farming Industries in Which Engaged.

Respondent Identification Code No.	Job Title N=46	Years of Experience in Occupation[a]	Farming Industries in Which Engaged[b]						
			Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
101	Farmer	5							X
102	Farm Foreman	6							X
103	Farmer	15							X
104	Farm--Equipment Operator	4				X			X
105	Farm Hand, General	6				X			X
106	Farmer	15				X			X
107	Farmer	15				X			X
108	Farmer	6				X	X		X
109	Farmer	15	X			X	X		X
110	Farmer	6		X		X	X		X
111	Farmer	30	X			X			X
112	Farmer	15		X	X	X			X
113	Farmer	10		X		X			X
114	Farmer	2				X			
115	Farmer	6				X			
116	Farmer	10				X			
117	Farmer	29				X			
118	Farmer	30				X			
119	Farmer	1				X	X		
120	Farmer	8				X	X		
121	Farmer	9				X	X		
122	Farmer	18				X	X		
123	Farmer	15				X	X		
124	Farmer	4	X			X	X		
125	Farm Hand, General I	5	X		X	X	X		
126	Farm Manager	5				X	X	X	
127	Farmer	31				X	X	X	
128	Farmer	4	X			X			
129	Farmer	4	X			X			
130	Farmer	4	X			X			

131	Farmer	20					X			X			
132	Farmer	20					X			X			
133	Farmer	30					X			X			
134	Farmer	12							X				
135	Farmer	30	X			X			X				
136	Farmer	14	X										
137	Farmer	15	X										
138	Farmer	16	X										
139	Farmer	18	X										
140	Farmer	30	X										
141	Farmer	32	X										
142	Farm Hand, General I	5								X			
143	Farm Hand, General II	1				X							
144	Farmer	15				X							
145	Farmer	4		X									
146	Farm Manager (Vineyard)	10		X									
Total			14	5		5	30		14	6		13	

[a]The mean years of experience in occupation was 13.2.

[b]The mean number of farming industries per respondent was 1.9.

able S-2.--Respondents in Environmental Horticulture by Job Title, Years of Experience in Occupation, and Industries in Which Engaged.

Respondent Identification Code No.	Job Title N=26	Years of Experience in Occupation[a]	Industries in Which Engaged[b]						
			Arboriculture	Bedding Plants	Garden Center	Grounds-keeping/Parks	Landscaping	Nursery Production	Turf and Sprinkler
201	Laborer, Nursery	1		X	X			X	
202	Nursery Farmer	2		X	X			X	
203	Salesperson, House Plants	2		X	X			X	
204	Nursery Worker	6		X	X			X	
205	Laborer, Nursery	15		X	X	X	X	X	X
206	Nursery Manager	1			X		X	X	X
207	Greenhouse Worker	1		X				X	
208	Laborer, Nursery	4		X				X	
209	Nursery Foreman	4				X	X	X	
210	Nursery Person	5	X			X	X	X	
211	Landscape Foreman	26				X	X	X	X
212	Laborer, Nursery	1					X	X	X
213	Site Developer	25					X	X	X
214	Nursery Worker	2			X				
215	Nursery Manager	25		X	X				
216	Landscaper	1	X	X		X	X		
217	Landscaper	4	X	X		X	X		X
218	Laborer, Landscape	1					X		
219	Landscape Foreman	3	X				X		X
220	Laborer, Landscape	1					X		X
221	Landscape, Superintendent	18					X		X
222	Laborer, Landscape	2				X			
223	Groundskeeper	2				X			
224	Tree Trimmer	6	X			X			
225	Tree Trimmer	1	X						
226	Tree Trimmer	1	X						
Total			7	10	8	9	13	13	9

[a]The mean years of experience in occupation was 6.2.

[b]The mean number of industries per respondent was 2.7.

Table S-3.--Respondents in Farm Implement Repair by Job Title and Years of Experience in Occupation.

Respondent Identification Code No.	Job Title N=17	Years of Experience in Occupation[a]
301	Farm-Equipment Mechanic	1
302	Farm-Equipment Mechanic	1
303	Farm-Machinery Set-up Man	1
304	Farm-Machinery Set-up Man	2
305	Farm-Equipment Mechanic	2
306	Manager, Farm Equipment	3
307	Farm-Equipment Mechanic	3
308	Farm-Equipment Mechanic	4
309	Farm-Equipment Mechanic/Service Manager	4
310	Farm-Equipment Mechanic	5
311	Farm-Equipment Mechanic	5
312	Farm-Equipment Mechanic	5
313	Farm-Equipment Mechanic	8
314	Farm-Equipment Parts Manager	15
315	Farm-Equipment Service Manager	15
316	Farm-Equipment Service Manager	25
317	Farm-Equipment Company Manager	26

[a]The mean years of experience in occupation was 7.4.

Table S-4.--Respondents in the Biological-Technical Services in Agriculture by Job Title, Years of Experience in Occupation, and Industries in Which Engaged.

Respondent Identification Code No.	Job Title N=23	Years of Experience in Occupation[a]	Industries in Which Engaged[b]					
			Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed/Services	Waste Disposal	Water Resources
401	Manager, Meat Processing Plant	1			X			
402	Manager, Fruit Processing Plant	4			X			
403	Chemist, Wine	10			X			
404	Assistant Manager, Food Processing	18			X			
405	Vice President, Quality Control	37			X			
406	Sales Representative, Ag Chemicals	8	X		X		X	X
407	Manager, Fruit Processing Plant	17	X		X		X	X
408	Waste-Disposal Operator	1			X		X	X
409	Manager, Milk Processing Plant	36			X		X	
410	Sales Representative, Ag Chemicals	10	X		X	X		
411	Veterinary Assistant	3		X				
412	Veterinary Assistant	3		X				
413	Veterinary Assistant	5		X				
414	Veterinary Assistant	5		X				
415	Biologist/Ecologist	3		X			X	X
416	Lead Operator, Fertilizer Plant	1	X				X	X
417	Superintendent, Grain Elevator	18	X			X		
418	Technician, Civic Engineer	8					X	X
419	Warehouseman	1				X		
420	Operator, Feed Mill	2				X		
421	Sales Representative, Feed Company	10				X		
422	Waste-Treatment Operator	2					X	
423	Waste-Treatment Superintendent	5					X	
Total			5	5	10	5	9	6

[a]The mean years of experience in occupation was 9.0.

[b]The mean number of industries per respondent was 1.7.

SERIES B

PERCENTAGE DISTRIBUTION OF JOB SKILLS NEEDED,
OR NOT NEEDED, BY RESPONDENTS FOR OCCUPATIONAL
ENTRY INTO THEIR SELECTED INDUSTRIES.

Table S-5--Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Agricultural Production.

Code Number	Job Skills	Selected Farming Industries[a]						R=Rejected/Not Needed[b]
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)
85001	Determine best use for each land capability class on the farm.	71	60	80	73	92	83	53
85002	Identify type of farming appropriate for the land capability classes of the farm.	71	60	80	76	85	83	61
85003	Use results of soil tests to specify fertilizer analysis for each crop on the farm.	85	60	80	90	78	100	76
85004	Identify crops appropriate for the soils for the farm.	71	60	80	80	85	50	69
85005	Specify amount of fertilizer per acre for crops to be grown on the farm.	71	80	60	80	64	83	69
85006	Determine form of plant food to use on the crops of the farm (dry, liquid, gas).	42	100	40	70	57	66	53
85007	Specify kind & amount of liming material to reach desired pH level in the soil.	57	60	60	70	57	83	61
85008	Specify drainage programs consistent with the crop & the soil type.	50	60	60	66	71	50	46
85009	Maintain organic matter level in the soil.	64	60	60	73	78	66	69
85010	Prepare soil for the crops to be grown.	71	80	60	90	85	83	76
85011	Maintain desirable soil tilth in the soils of the farm.	71	80	60	86	78	100	84
85012	Take soil samples to deliver to the soil testing laboratory.	64	80	60	73	57	66	53
85013	Choose appropriate tillage equipment for the kind of soil & the crops to be grown on the farm.	78	80	60	90	78	66	84
85014	Choose appropriate varieties of each crop.	85	60	80	90	78	66	76
85015	Plant seeds and/or plants at appropriate rate & spacing in the row & in row width.	85	100	80	96	92	83	92
85016	Plant seeds and/or plants at appropriate depth.	85	80	80	96	85	83	92
85017	Control weeds in crops using appropriate methods & materials.	92	100	80	93	92	100	76
85018	Control diseases & insects of each crop grown on the farm.	78	100	80	86	92	100	61
85019	Harvest the crop at the appropriate stage of maturity.	92	100	80	90	92	83	76
85020	Store the crop under appropriate conditions.	92	60	80	90	92	83	76
85021	Deliver the crop to the market in acceptable condition.	92	80	80	83	92	66	69
85022	Condition the crop after harvest (drying, controlled atmosphere).	71	60	80	80	78	66	69
85023	Grade the crop for market.	42	80	80	46	64	R16	61

85024	Use growth regulators on crops where these are appropriate.	R35	40	80	40	50	50	R23
85025	Dispose of crop residues in such a way as to avoid pollution.	50	100	80	63	64	50	46
85026	Determine production performance of each farm enterprise in relation to an acceptable standard (tele-farm, best 25 or 50% of farms, etc.).	50	80	80	70	64	83	53
85027	Compare costs in relation to production with acceptable standards: Labor costs/acre of a crop; Labor costs/100# of meat; Machinery costs/acre, etc.	71	40	60	83	85	100	61
85028	Keep farm accounts which will allow comparison of performance with farms reported by tele-farm.	71	60	80	86	71	83	69
85029	Keep farm accounts which will provide information needed for income tax reports.	85	80	80	86	85	100	69
85030	Adjust the farming program based on crop & livestock reports from USDA and/or reports from other reliable sources.	57	R 0	60	56	57	R16	R30
85031	Adjust inputs (labor, machinery, fertilizer, feed, etc.) based on relative costs & anticipated return.	78	60	80	80	78	83	61
85032	Identify sources of farm supplies.	85	80	80	86	78	66	84
85033	Determine most economical sources of supply.	85	60	80	93	85	83	76
85034	Identify outlets for products of the farm.	78	80	80	86	85	83	69
85035	Determine outlets offering best return for farm products.	78	80	80	86	85	83	69
85036	Perform budgeting skills for both the whole farm & individual enterprises.	64	60	80	76	78	83	53
85037	Conduct a business meeting of people engaged in agriculture or agricultural business.	50	R20	60	66	64	83	46
85038	Prepare a written analysis of a current agricultural issue, situation or problem.	50	40	80	R36	42	R33	R38
85039	Make an oral presentation of a current agricultural issue, situation or problem before a group of persons engaged in agriculture or agricultural business.	50	R20	60	50	64	50	R30
85040	Successfully participate in activities of the local FFA chapter or other organization involving a broad spectrum of activities.	64	R20	60	80	92	66	69
85041	Participate as a member in a farmers organization.	71	60	60	76	78	66	76
85042	Participate in a local community organization.	71	R20	60	70	71	50	69
85043	Select the type of livestock appropriate for the farm.	78	R20	40	63	85	83	R30
85044	Select a breed of livestock appropriate for the farm.	78	R20	40	63	85	83	R30
85045	Select high-performing stock for the breeding program of the farm.	92	R20	40	56	85	66	R38
85046	Feed livestock for most economical production.	85	R20	40	70	92	100	R38
85047	Specify appropriate rations for livestock at various levels of maturity.	85	R20	40	73	92	100	46
85048	Specify appropriate rations for livestock at various levels of production.	78	R20	40	70	85	100	R38
85049	Use sanitation practices with livestock to avoid diseases and/or parasites.	85	R20	40	73	92	100	R38

Table S-5.--Continued.

Code Number	Job Skills	Selected Farming Industries[a]					R=Rejected/Not Needed[b]	
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)
85050	House livestock for optimum production.	85	R20	40	73	92	100	R38
85051	Assemble livestock products produced on the farm (such as milk & eggs) under appropriate conditions.	85	R20	40	63	71	66	53
85052	Deliver livestock & livestock products to the market under appropriate conditions.	85	R20	40	70	85	66	53
85053	Castrate livestock (calves, lambs, swine, & others) where appropriate.	64	R20	40	56	85	R33	46
85054	Dehorn calves.	71	R20	40	46	64	R33	46
85055	Dehorn feeder cattle.	71	R20	40	40	50	R16	R38
85056	Operate a milking machine.	92	R20	40	46	50	R16	46
85057	Clean a milking machine.	85	R20	40	46	50	R16	46
85058	Operate an egg grader.	R21	R20	40	R30	R28	50	R38
85059	Candle eggs.	R21	R20	40	R30	R28	50	R38
85060	Estimate grade of livestock & livestock products.	64	R20	R20	63	71	83	R23
85061	Mark livestock for identification.	78	R20	40	56	78	R33	53
85062	Identify gasoline fueled & diesel fueled engines.	92	100	100	96	92	100	100
85063	Identify two-stroke & four-stroke cycle engines.	85	80	60	70	71	83	76
85064	Clean the carburetor of a gasoline fueled engine.	64	80	60	73	85	66	76
85065	Adjust the carburetor of a gasoline fueled engine.	64	80	60	73	85	66	76
85066	Check the fluid level of battery cells.	78	100	80	83	85	50	92
85067	Charge a battery according to specifications.	64	100	80	70	71	60	84
85068	Connect booster cables properly.	78	100	100	83	85	66	92
85069	Check specific gravity of electrolyte & temperature to compensate the reading.	57	40	80	53	64	R33	53
85070	Install a battery in a tractor or other farm or garden machinery.	78	100	100	80	85	66	84
85071	Clean battery terminals.	78	100	80	76	85	66	76
85072	Remove & replace starter from tractor.	64	100	80	66	85	50	69
85073	Check & adjust or replace distributor points & condensers.	64	100	80	73	85	66	76
85074	Check, clean, & adjust spark plugs.	85	100	80	76	85	50	76
85075	Replace ignition secondary wires.	42	80	60	60	85	50	61

85076	Flush the cooling system.	64	80	60	73	85	50	69
85077	Prepare & check cooling system against freezing.	78	100	80	90	92	50	92
85078	Clean outside of radiator to assure proper cooling.	85	100	100	86	100	50	92
85079	Check & replace fan belt.	85	80	80	80	78	50	76
85080	Clean & maintain cooling capacity of air cooled engine.	64	100	80	76	71	50	84
85081	Check oil level in an internal combustion engine.	92	100	100	90	92	66	92
85082	Change oil in internal combustion engines.	85	100	80	90	92	66	92
85083	Change oil filter in internal combustion engines.	85	100	80	83	92	66	76
85084	Change or clean air cleaner in internal combustion engines.	85	100	80	86	92	50	92
85085	Clean and/or lubricate linkage on internal combustion engines.	76	100	80	80	92	50	84
85086	Clean & lubricate the steering mechanism of a tractor.	85	100	80	86	100	66	84
85087	Check and/or replace transmission fluid in internal combustion engine driven machines.	71	100	80	86	92	66	92
85088	Check & replace lubricant in differentials of tractors and/or other farm machinery.	71	100	80	80	85	50	84
85089	Clean & lubricate wheel bearings of tractors & other farm machinery.	64	100	80	80	85	50	84
85090	Check & adjust brakes on tractors & other power driven farm machinery.	71	100	80	66	85	50	69
85091	Determine when brakes need replacement or major repair.	92	100	80	80	78	50	92
85092	Check and/or replace fluid in hydraulic brake system.	71	100	80	76	92	R33	76
85093	Check operation of hydraulic lift and/or hydraulic system of other farm machinery.	78	100	80	90	92	66	84
85094	Perform maintenance operations on the hydraulic system as specified in the manual.	71	80	60	83	100	66	69
85095	Determine length & size of V-belt needed for specified power transmission.	71	100	80	76	71	50	92
85096	Install pulleys as specified for specific machinery.	64	80	80	80	71	50	84
85097	Identify situations in which electric power is appropriate.	57	80	80	73	78	50	61
85098	Lubricate electric motors.	85	80	80	86	92	50	84
85099	Prepare plans for use of electric power for intermittent power as pumping water, cooling milk, operating conveyors.	57	40	60	60	64	66	46
85100	Prepare plans for use of electric power for heating (as in milkhouse, pads for pigs, chick brooders, etc.).	42	40	60	50	50	66	53
85101	Prepare plans for use of electric power for grain dryers, ventilators, air conditioners, etc.	R35	60	60	50	42	66	53
85102	Inflate tires.	78	100	100	73	78	50	69
85103	Identify machinery parts by code number.	57	80	80	60	71	50	76
85104	Operate all farm equipment commonly used in the area.	78	100	80	80	85	66	84

Table S-5.--Continued.

Code Number	Job Skills	Selected Farming Industries[a]						R=Rejected/Not Needed[b]
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)
85105	Adjust all farm equipment commonly used in the area.	85	100	80	83	92	66	84
85106	Diagnose malfunctioning of farm equipment commonly used in the area.	85	100	80	90	85	66	100
85107	Identify defective parts on farm equipment.	92	100	100	93	100	83	92
85108	Replace defective parts on farm equipment.	78	100	80	96	100	100	92
85109	Identify farm equipment parts by the code number on the part.	50	80	80	76	71	50	84
85110	Calibrate seeding equipment ot apply specified rates per acre.	85	80	80	90	85	50	84
85111	Calibrate fertilizer & chemical applicator equipment to apply specified rates per acre.	85	100	80	96	85	66	92
85112	Inventory needed repairs in a farm building (includes roof, siding, walls, floors & foundations).	78	80	80	76	78	66	69
85113	Select materials for appropriate repairs.	57	60	60	80	78	66	61
85114	Make specified building repairs under the direction of a supervisor.	85	80	60	86	92	66	84
85115	Follow practices to avoid injury to workers and/or livestock when making repairs.	92	80	80	93	92	66	100
85116	Follow practices to avoid damage to buildings and/or contents when making repairs.	85	80	80	90	85	66	92
85117	Select appropriate paint and/or preservative for maintenance of buildings.	71	60	60	66	64	R33	53
85118	Paint buildings (interior & exterior) according to specifications of a supervisor.	64	100	80	76	85	50	69
85119	Adjust building ventilation & air conditioning equipment for optimum conditions.	71	60	60	80	78	50	69
85120	Repair material handling equipment (conveyors, elevators, gutter cleaners, etc.).	92	60	60	86	78	83	76
85121	Repair or replace farm fence, roads, & other farmstead facilities.	78	80	60	76	78	83	76

[a]The 87 responses for the seven selected farming industries in agricultural production were reported from only 46 individuals: i.e., the mean number of farming industries per respondent was 1.9.

[b]If 40 percent or more of the respondents indicated a skill was needed for job entry, the job skill was accepted; if less than 40 percent, the skill was declared "not needed" (rejected). The prefix "R" indicates the percentage was less than 40 and, hence, the skill was not needed (rejected) for job entry.

Table S-6.--Percentage Distribution of Job Knowledge Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Agricultural Production.

Code Number	Job Knowledge	Selected Farming Industries[a]						[illegible]-Review[b]
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)
85501	Characteristics that determine land capability class.	R21	R20	40	R16	R21	R16	R15
85502	Factors which limit capability of soil.	42	40	60	33	42	50	R23
85503	Relationship of land capability & type of farming which is appropriate.	R28	40	40	36	R28	50	38
85504	Relationship of land capability classes & crops which are appropriate.	R21	60	40	33	35	50	38
85505	Optimum levels of NPK & minor elements for specific crops.	57	40	40	46	50	83	R30
85506	Relative costs of various forms of plant nutrients (liquid, solid, gas).	R21	40	40	33	35	50	R 7
85507	Relative rates of availablity of various forms of plant nutrients (liquid, solid, gas).	35	R20	40	R23	R28	R16	R23
85508	pH levels required by various crops for optimum production.	50	R20	40	R30	42	50	R23
85509	Kinds of liming materials commonly available in the area.	R21	40	60	R13	R21	R16	R23
85510	Effectiveness of various kinds of liming materials on the soils of the area.	R28	40	80	33	35	R16	R15
85511	Relation of drainage to production of various crops of the area.	42	R20	60	R23	42	33	R 0
85512	Function of organic matter in the soil.	R14	40	R20	R26	42	33	R23
85513	Various methods of adding organic matter to the soil.	R21	40	R20	R20	35	33	R15
85514	Water requirements of crops commonly grown in the area.	R14	40	40	R20	R21	R16	R30
85515	Methods of determining quantity of water needed to supplement natural rainfall for specified crops.	R [illegible]	60	60	R10	R21	R16	R23
85516	Characteristics of a desirable seed bed for crops to be grown in the area.	57	60	40	43	64	50	R30
85517	What tillage equipment & methods will result in a desirable seed bed.	57	80	60	53	64	66	38
85518	Factors affecting soil tilth.	R21	80	40	46	35	50	38
85519	Depth from which to take samples for soil tests.	R28	40	40	R30	R21	33	R15
85520	The area to be represented by a specific soil sample.	R28	40	40	R30	R21	R16	R23
85521	Characteristics of a composite soil sample.	R28	R20	R20	R23	R28	R16	R15
85522	The effect of each kind of tillage equipment on soil.	42	80	40	50	42	33	46
85523	The soil properties that determine soil management groups & units.	R28	R 0	40	R13	R21	R16	R15

43

85524	The adaptability of crops to various soils of the area.	57	40	60	53	57	66	38
85525	The characteristics of various crop varieties.	50	40	60	36	35	R16	R30
85526	The most appropriate varieties for various soil types of the area.	42	60	60	43	42	33	R30
85527	The seed treatments appropriate for seeds to be planted.	42	40	60	43	50	R16	R30
85528	The optimum rates of seeding for each of the crops grown in the area.	57	40	60	50	42	33	38
85529	The optimum rates of planting for each of the crops which are produced from plants.	42	R20	60	R30	35	R16	38
85530	The optimum spacing & row width for seeds and/or plants grown in the area.	57	R20	60	36	50	R16	38
85531	The appropriate depth of planting for seeds or plants grown in the area.	42	40	60	40	64	33	46
85532	The kinds of chemicals to be used to control weeds for specific crops in the area.	64	60	80	60	64	50	46
85533	The time of application of herbicides for specific crops of the area.	64	60	80	60	71	66	46
85534	The residual effects of herbicides on future crops to be grown in the soil.	71	60	80	60	71	66	46
85535	The effective means of controlling weeds by cultivation.	42	40	60	43	50	50	R30
85536	The common diseases & insects affecting crops & measures for their control.	57	60	60	53	57	66	46
85537	The characteristics of the crop indicating when it should be harvested.	64	80	60	43	42	R16	38
85538	The harvesting methods used to retain quality of the crop.	57	80	40	56	57	50	61
85539	The storage methods to retain desired qualities.	42	60	40	43	50	R16	53
85540	The characteristics of a crop for optimum market condition.	50	80	40	53	57	33	61
85541	The methods for maintaining optimum market condition while moving a crop to market.	42	60	60	43	35	33	53
85542	The methods of conditioning crops after harvest (drying, cooling, controlled atmosphere, etc.).	R28	R20	40	R26	42	33	R30
85543	Characteristics of grades of each crop.	R28	40	40	R16	35	R16	R30
85544	The growth regulators & their characteristics.	R14	40	60	R10	R14	R 0	R23
85545	The purposes of each kind of growth regulator.	R14	40	60	R16	R28	R16	R23
85546	The effect of crop residues on the environment.	R 0	R20	R20	R16	R21	33	R 7
85547	How to treat residues to minimize damage by pollution.	R 7	40	40	R23	R21	33	R15
85548	Factors affecting the size of the farm business.	42	R20	60	R30	42	33	38
85549	The factors affecting the organization of the farm business including partnerships & corporations.	42	R20	60	36	50	50	38
85550	The percent of tillable acres of each crop on the farm for best land use & for efficient labor diversification.	42	R20	60	R30	64	R16	R30
85551	The crop yield per acre of each crop on the farm.	R21	R 0	40	R26	35	33	R23
85552	The crop costs per tillable acre for each crop on the farm.	42	40	60	53	64	66	R30

Table 5-6.--Continued.

Code Number	Job Knowledges	Selected Farming Industries[a]							R=Review[b]
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato	
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)	
85553	The value per tillable acre of each crop grown on the farm.	42	40	60	43	50	33	R30	
85554	Total cost per animal of each kind of livestock on the farm.	42	R20	40	40	64	50	R15	
85555	Production per animal for each kind of livestock on the farm.	64	R20	40	46	71	50	R23	
85556	Dollar return per unit for each kind of livestock on the farm.	42	R20	40	40	71	66	R15	
85557	How the farm records compare with similar farms in the tele-farm program.	35	R20	60	R16	35	R16	R 7	
85558	Relation of the USDA Livestock & Crop reports & reports from other reliable sources to price fluctuations of farm products.	R14	R 0	R20	R13	R21	R16	R 7	
85559	The effects of input on the production costs per unit.	35	R20	40	R23	35	R16	R23	
85560	Sources of farm supplies.	R28	40	40	R23	R21	R16	R23	
85561	Availability of supplies at the time they are needed.	64	60	40	43	42	50	38	
85562	Outlets for farm products.	42	80	40	36	42	R16	61	
85563	Ability of outlets for farm products to receive the product at the time it is available.	35	60	R20	36	42	33	46	
85564	What a financial statement indicates.	64	R20	60	56	71	83	38	
85565	What an income & expense statement is & how it is used to determine profit & loss.	57	R20	60	56	64	83	46	
85566	The basic tax laws including: income tax, workmen's compensation, minimum wage, & property tax.	50	40	80	46	57	83	46	
85567	The basic economic principles including: diminishing returns, substitution of inputs: capital-labor substitution, & rates of return.	R28	40	80	R30	42	66	R23	
85568	Standard parlimentary procedures such as "Roberts Rules of Order".	R14	R20	R 0	R16	R14	R16	R 7	
85569	The current agricultural issues.	R14	R 0	R 0	R20	R14	66	R 7	
85570	How to prepare an analysis of an issue or problem.	R14	R20	R20	R16	35	33	R 7	
85571	The fundamental differences between a corporate & cooperative business organization & the advantages of each.	R 7	40	R20	R13	R21	33	R 7	
85572	The factors determining kind of livestock appropriate for the farm.	50	R20	40	R26	57	R16	R23	
85573	Characteristics of breeds of livestock.	R28	R 0	R20	R10	R14	R 0	R 0	
85574	The breeding services available.	42	R 0	R20	R16	R21	R 0	R 7	
85575	High-performing blood-lines in relation to production.	R28	R20	R20	R20	R28	R16	R15	

85576	Relation of kinds of feed available to kind of livestock appropriate for the farm.	42	R20	40	R23	50	R16	R15
85577	Methods of balancing rations for specific kinds of livestock.	64	R20	40	33	57	R16	R23
85578	Relation of livestock production ability to feeding program.	57	R20	40	36	64	R16	R23
85579	Feed requirements of livestock at various levels of maturity.	64	R20	40	33	50	R16	R23
85580	The proportion of feed nutrients in grains & forage to be fed to livestock.	42	R20	40	R26	57	R16	R15
85581	Sanitation practices to be followed in the livestock feeding program.	R28	R20	R20	33	50	R16	R23
85582	Sanitation practices to be followed in providing water for livestock.	R21	R20	R20	R30	50	33	R23
85583	Sanitation program to be followed in livestock housing, feed lots, & pastures.	35	R20	R20	40	50	66	R23
85584	Housing requirements of livestock in terms of temperature.	35	R20	R20	33	50	50	R15
85585	Housing requirements of livestock in terms of ventilation.	42	R20	R20	R23	35	R16	R15
85586	Housing requirements of livestock in terms of humidity.	42	R20	R20	R23	R28	R16	R15
85587	Requirements for holding and/or storage of livestock products to retain maximum quality.	42	R20	R20	R23	35	R 0	R30
85588	Conditions needed to maintain maximum quality while moving products to market.	42	R20	R20	R26	42	R 0	R15
85589	Sanitation practices to be followed in castrating and/or dehorning livestock.	50	R20	R20	36	57	R16	R30
85590	How to avoid potential dangers to the cow through improper use of a milking machine.	64	R20	40	R30	35	R16	R15
85591	The weight per dozen of various grades of eggs.	R14	R 0	R20	R 6	R 7	R16	R 0
85592	The interior characteristics of eggs which determine grade.	R14	R 0	R20	R10	R14	R 0	R 7
85593	Characteristics of livestock which determine grade.	R14	R20	R20	R16	R28	R 0	R15
85594	The grades of various livestock products & the characteristics of the product that determine grade.	R28	R20	R20	R26	42	R16	R15
85595	The breed association requirements for identification of animals.	R28	R 0	R20	R13	R14	R 0	R 0
85596	How to observe livestock & how to interpret the observations.	R28	R 0	40	33	57	33	R 7
85597	The basic principles of operation of 4-stroke cycle engines.	R14	R20	R20	R16	R14	R 0	R30
85598	The basic principles of operation of 2-stroke cycle engines.	R14	R20	R20	R13	R 7	R 0	R23
85599	The basic differences between diesel & gasoline fueled engines.	50	R20	40	36	42	50	46
85600	The common agricultural uses of the various types of engines.	R21	R20	R20	R16	R14	R 0	R30
85601	The specifications & directions in the manual for cleaning and/or adjusting the carburetor of a gasoline fueled engine.	35	40	40	R16	R21	R 0	R23
85602	The materials & processes used in battery construction.	R21	R 0	40	R 6	R14	R 0	R 7
85603	The methods of series & parallel connections to increase battery voltage or capacity.	R 7	R20	40	R20	35	R16	R23
85604	The reasons for battery preventive maintenance & results of neglect.	57	R 0	40	R26	35	R16	R23

23

B

Table S-6.--Continued.

Code Number	Job Knowledges	Selected Farming Industries[a] R=Review						
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)
85605	The chemical processes that take place during battery charge & discharge.	R14	R 0	40	R 3	R 7	R 0	R 0
85606	The battery's function in the charging & starting system.	42	R 0	40	R13	R14	R 0	R15
85607	The causes & results of battery sulfation.	R21	R 0	40	R 6	R21	R 0	R 7
85608	The safety precautions to be observed when charging or servicing a battery.	64	40	60	33	35	R16	R30
85609	The composition of battery electrolyte.	R 0	R 0	R 0	R 3	R 7	R 0	R 7
85610	The capacity ratings of batteries.	R 7	R 0	R20	R 6	R 7	R 0	R 7
85611	The criteria used in selecting a replacement battery.	R14	R20	R20	R10	R14	33	R 7
85612	Relationship of voltage, amperage, & resistance as expressed by Ohm's Law.	R 7	R 0	40	R 3	R 7	R 0	R 0
85613	The ignition timing & it's relationship to crankshaft position, engine speed, & load.	R21	R 0	40	R16	R21	R16	R30
85614	The function of ignition coil & condenser.	R14	R 0	40	R16	R21	R 0	R30
85615	The construction of spark plug & selection.	R21	R 0	40	R13	R21	R 0	R15
85616	The purpose & method of flushing cooling system.	R21	R 0	40	R10	R 7	R 0	R 7
85617	The instructions in the manual for servicing the cooling system.	50	R20	40	R23	R28	R 0	R23
85618	The instructions in manual governing size of fan belt.	R14	R20	R20	R20	R21	R16	R23
85619	The instructions in manual governing adjustment of fan belt.	R28	R20	R20	R23	R28	R16	38
85620	Directions in manual for checking and/or changing oil in internal combustion engine being serviced.	50	40	40	43	42	33	61
85521	The code specifications for weights & grades of lubricants specified in manual.	50	60	40	40	R28	R16	61
85622	Instructions in manual for cleaning and/or changing air cleaners.	50	60	40	40	35	R 0	69
85623	The instructions in manual for cleaning and/or lubricating linkages in internal combustion engines.	R21	R20	40	R13	R14	R 0	38
85624	The instructions in the manual for lubricating the steering mechanism of the tractor.	R21	R20	40	R23	R28	33	38
85625	The instructions in manual for checking & replacing transmission fluid.	R28	60	40	40	42	33	69
85626	The instructions in manual for checking and/or changing lubricant in differential of tractors and/or other farm machines.	R28	60	40	43	42	33	69

85627	Methods & specifications for cleaning, lubricating, & adjusting wheel bearings in tractors & other farm machinery.	42	40	40	R26	R21	R 0	53
85628	The importance of need for lubrication of all moving parts of all farm machinery.	50	60	40	50	42	50	69
85629	Manual specifications for adjustment of brakes.	R21	60	40	R26	R28	33	46
85630	Specifications in manual regarding condition of brake linings.	R21	40	40	R13	R 7	R 0	R23
85631	Specifications in manual regarding choice & use of hydraulic brake fluid.	R21	40	40	R23	R28	R16	R30
85632	Manual for specifications regarding performance of the hydraulic system.	R21	60	40	R16	R14	R 0	R30
85633	Maintenance specifications of the hydraulic system in the manual.	R14	80	40	33	R21	R 0	69
85634	How to measure for length of belt needed.	R21	80	40	40	35	R16	53
85635	How to determine size of V-belt needed for specified pulleys.	R21	80	40	33	35	R16	46
85636	How to compute pulley sizes to control speeds of driven machines.	R21	40	R20	R26	R28	33	R30
85637	Characteristics of electric power that give it advantages over power from internal combustion engines.	R 0	40	R20	R 6	R14	R16	R 7
85638	Potential danger to motors of over lubricating.	35	40	40	40	35	33	53
85639	Basic controls for electric equipment as thermostats, pressure switches, time clocks, etc.	R28	40	R20	R30	R14	33	46
85640	Need for proper inflation of tires.	50	80	40	43	50	33	53
85641	Inflation directions for tires of machine being serviced.	57	80	60	46	50	33	76
85642	Use of manual and/or parts catalogs to locate replacement parts for farm machinery.	42	40	40	33	35	33	46
85643	The function of each piece of farm equipment used in the area.	35	60	60	43	R28	33	76
85644	When farm equipment is operating correctly.	57	80	60	53	57	50	69
85545	The relationship of the various parts of each piece of farm equipment so that defects can be quickly detected.	50	60	80	46	57	50	61
85646	The use of the manual in adjusting pieces of farm equipment for optimum operation.	78	60	80	50	50	R16	61
85647	The relation of accurate calibration of farm machines to optimum yields per acre.	50	40	80	53	50	50	69
85648	Visual evidences indicating need for repair of all parts of a building.	57	40	40	36	50	50	38
85649	Kinds & uses of materials commonly used in repair of farm buildings.	35	40	40	R26	R28	33	38
85650	How to make measurements for specified repairs & how to make the repairs.	50	40	40	40	50	50	46
85651	Correct choice & use of tools for installing specified repairs in farm buildings.	50	40	40	36	42	33	53
85652	Potential hazards such as falling, electrical hazards, fire, water, etc.	85	60	80	56	71	50	61
85653	Potential damage from fire, water, & contamination, etc.	71	60	80	43	57	33	61

Table S-6.--Continued.

Code Number	Job Knowledges	Selected Farming Industries[a]						R=Review[b]
		Dairy	Bush/Vine Fruit	Tree Fruit	Grain/ Bean	Livestock (Beef/Swine/ Sheep)	Poultry	Vegetable/ Beet/ Potato
		% (N=14)	% (N=5)	% (N=5)	% (N=30)	% (N=14)	% (N=6)	% (N=13)
85654	The purpose of kinds of paint & preservatives in the maintenance of farm buildings.	R21	40	40	R20	35	33	R23
85655	The appropriate techniques for applying paint & preservatives for optimum preservation of buildings.	42	R20	40	R30	R28	R16	38
85656	The optimum temperature, humidity & air circulation for specified livestock, poultry, other kinds of livestock & for fruits, vegetables, & farm crops.	R28	R20	40	R23	R28	33	R23
85657	The principles of operation of materials handling equipment (conveyors, elevators, gutter cleaners, etc.).	42	40	40	43	50	66	46
85658	The functions of farmstead facilities which depend on proper installation.	R28	40	R20	R30	35	33	38

[a]The 87 responses for the seven selected farming industries in agricultural production were reported from only 46 individuals; i.e., the mean number of farming industries per respondent was 1.9.

[b]If 33 percent or more of the respondents indicated a knowledge was "essential" for job entry, the job knowledge was accepted; if less than 33 percent, the knowledge was reviewed. When the job skill associated with the reviewed knowledge was accepted, the associated knowledge marked "review" was also accepted. However, if the job skill associated with the reviewed knowledge was rejected, the associated knowledge was also rejected.

Table S-Z--Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Environmental Horticulture.

Code Number	Job Skills	Selected Industries[a]						R=Rejected/Not Needed[b]
		Arbori-culture	Bedding Plants	Garden Center	Grounds-keeping	Land-scaping	Nursery Production	Turf and Sprinkler
		% (N=7)	% (N=10)	% (N=8)	% (N=9)	% (N=13)	% (N=13)	% (N=9)
85001	Bud graft.	R28	R 0	R12	R11	R23	R 7	R33
85002	Make stem cuttings.	R14	R20	R37	R 0	R23	R23	R33
85003	Make root cuttings.	R28	R30	62	R11	R30	R38	R33
85004	Make cleft, whip, tongue, & side grafts.	R28	R20	R37	R11	R23	R23	R33
85005	Select cutting & grafting stock.	42	R20	R37	R22	R30	R30	R33
85006	Store cutting & grafting stock.	R28	R20	R12	R11	R23	R23	R22
85007	Line out rooted cuttings.	R28	R30	R37	R22	R38	46	44
85008	Fertilize rooted cuttings.	R28	R20	R25	R22	R38	R38	44
85009	Prepare media for growing rooted cuttings.	R28	40	50	R22	46	46	55
85010	Sow seeds of plants.	R28	40	R37	R33	R38	46	55
85011	Provide suitable seed-bed for various seeds.	R28	50	62	44	53	61	66
85012	Transplant seedlings.	42	60	75	44	61	76	77
85013	Adjust lighting for optimum growth of seedlings.	42	R20	R37	R33	46	R38	55
85014	Control temperature for optimum growth of seedlings.	42	40	62	R33	46	46	55
85015	Control moisture for optimum growth of seedlings.	42	50	62	R33	46	53	55
85016	Identify trees & shrubs used for environmental purposes to species.	100	40	R37	88	92	61	88
85017	Plant bare root trees & shrubs.	85	40	R37	100	84	61	88
85018	Prepare balled trees.	71	R20	R25	88	76	53	77
85019	Plant balled trees.	85	R30	R25	100	92	53	88
85020	Plant trees & shrubs with tree spade.	71	R30	R25	100	84	53	77
85021	Prune transplanted trees & shrubs used for environmental purposes.	100	R20	R12	88	84	46	77
85022	Prune flowering trees & shrubs.	100	R20	R12	77	84	46	77
85023	Prune standard trees which are used for environmental purposes.	100	R20	R12	66	84	46	77
85024	Prune coniferous species which are used for environmental purposes.	100	R20	R12	77	84	46	77
85025	Fertilize trees & shrubs by various methods.	85	R30	R25	100	92	53	88
85026	Adjust fertilizer applicators for broadcast application.	42	R30	R25	88	92	53	88

85027	Trace a wound in a tree.	100	R30	R25	77	92	53	100
85028	Clean wound cavities in trees.	100	R30	R25	77	84	53	88
85029	Finish cavity treatment in a tree.	100	40	R37	77	84	61	88
85030	Recognize insect problems in trees & shrubs.	100	40	R37	77	84	61	88
85031	Recognize disease problems in trees & shrubs.	100	40	R37	77	84	61	88
85032	Recognize environmental problems affecting trees and/or shrubs.	85	R30	R25	66	76	53	77
85033	Control insects & diseases in trees and/or shrubs.	85	40	R37	88	84	61	88
85034	Recommend trees and/or shrubs for various needs & environmental situations.	71	R20	R12	66	84	46	77
85035	Use related equipment; pruning tools, sprayers, planters, rope, etc.	100	R30	R25	88	100	53	100
85036	Adjust controls to maintain optimum temperature in the greenhouse.	R14	40	50	R11	R15	R38	R11
85037	Adjust controls to maintain optimum humidity in the greenhouse.	R14	40	50	R11	R15	R38	R11
85038	Adjust controls to maintain optimum lighting in the greenhouse.	R14	40	50	R11	R15	R38	R11
85039	Use appropriate sanitation practices in the greenhouse.	R14	60	62	R 0	R15	46	R22
85040	Prepare nursery stock for potting & perform potting operation.	42	70	87	44	46	76	44
85041	Recognize when to water & when to refrain from watering.	42	70	87	44	46	76	44
85042	Select fertilizer & make application.	42	50	75	44	46	61	44
85043	Plant nursery stock as specified by plan.	71	40	R37	100	84	61	77
85044	Prune & shape nursery stock at planting time.	100	40	R37	100	92	61	100
85045	Select items of nursery stock according to specifications on plan or order.	71	R30	R25	66	84	53	77
85046	Estimate relative quality of items of nursery stock of same genus & species.	71	R30	R37	66	84	53	77
85047	Suggest species & variety of trees, shrubs, or plants to meet needs of customer (size, shape, color, habit of growth, etc.)	71	R30	R37	66	76	53	77
85048	Identify specimens of nursery stock in terms of genus, species, & variety using label.	71	R30	R37	66	76	53	77
85049	Assess local soil conditions.	57	R20	R25	55	69	53	77
85050	Properly handle & store nursery stock (bare root, container, balled & burlapped) while out of the ground.	85	R30	R25	66	84	53	88
85051	Distinguish differences in various peat mosses & mulches.	57	R30	R25	55	76	46	77
85052	Prepare seed bed for lawn.	42	R10	R12	66	61	R30	66
85053	Seed a lawn.	42	R20	R25	77	76	46	88
85054	Prepare a lawn for sodding.	42	R20	R25	77	76	46	88
85055	Lay sod for a lawn.	42	R20	R25	77	84	46	100
85056	Protect & water a seeded lawn until seeding is established.	42	R20	R25	77	84	46	100

Table S-7.--Continued.

Code	Job Skills	Selected Industries[a]						R=Rejected/Not Needed[b]
		Arbori-culture	Bedding Plants	Garden Center	Grounds-keeping	Land-scaping	Nursery Production	Turf and Sprinkler
		% (N=7)	% (N=10)	% (N=8)	% (N=9)	% (N=13)	% (N=13)	% (N=9)
85057	Establish sod on a sodded lawn.	42	R20	R25	66	69	R38	77
85058	Fertilize an established lawn.	42	R20	R25	77	76	46	100
85059	Control weeds in an established lawn.	57	R20	R25	88	76	53	88
85060	Control common diseases in lawn grasses.	42	R20	R25	77	76	53	88
85061	Mow & maintain an established lawn.	R14	R20	R25	66	69	46	88
85062	Irrigate lawns on the basis of the use & needs of the lawn.	42	R20	R25	77	76	53	88
85063	Adjust hand sprayers for satisfactory operation.	42	50	75	55	76	61	88
85064	Adjust compressed air sprayers for satisfactory operation.	42	50	62	55	69	61	77
85065	Adjust small power sprayers for satisfactory operation.	57	50	62	77	84	69	88
85066	Adjust dusters for satisfactory operation.	57	50	62	55	76	61	88
85067	Adjust hedge shears for satisfactory operation.	42	40	50	66	76	61	77
85068	Adjust pruning equipment for satisfactory operation.	71	R30	R37	66	76	61	77
85069	Adjust chain saws for satisfactory operation.	100	40	R37	77	84	61	88
85070	Adjust lawn mowers for satisfactory operation.	42	R30	R37	66	76	53	100
85071	Adjust power tillers for satisfactory operation.	57	R30	R37	77	84	61	100
85072	Adjust garden tractors for satisfactory operation.	57	R30	R37	66	84	61	100
85073	Operate hand sprayers.	57	60	62	88	84	69	88
85074	Operate compressed air sprayers.	71	50	50	77	84	69	88
85075	Operate small power sprayers.	71	40	R37	100	92	61	100
85076	Operate dusters.	71	50	R37	77	84	61	88
85077	Operate lawn mowers.	R28	R30	R25	77	61	46	77
85078	Operate power tillers.	57	R20	R12	88	84	46	88
85079	Operate garden tractors.	57	R30	R37	88	76	61	88
85080	Use hand garden tools (hoe, rake, shovel, hand cultivator).	57	40	50	88	76	61	77
85081	Use garden pruners.	71	50	50	100	84	69	88
85082	Use pruning saws.	100	40	R37	100	84	61	88
85083	Meet the customer & maintain good communication under any given circumstances.	65	60	75	77	76	61	66
85084	Identify common weeds, shrubs & ornamental plants from specimens brought in by customers.	71	70	75	77	76	69	77

85085	Identify common disease and/or insect damage on plants brought in by customers.	71	60	87	66	76	76	77
85086	Suggest controls for weeds, insects or diseases presented by the customer.	71	70	87	77	84	76	88
85087	Explain dilutions, methods of application & safety cautions to be followed in use of chemicals.	57	60	75	55	69	69	77
85088	Demonstrate equipment & relate to customers situation.	57	40	50	55	69	53	77
85089	Explain function of fertilizer, pesticides & herbicides & relate them to customer needs.	71	70	87	77	84	76	88
85090	Present other garden merchandise (such as ornamentals, bird feeders, trellises, etc.).	R14	R30	R37	R22	R38	R30	R33
85091	Close the sale.	R14	R30	50	R11	R30	R30	R33
85092	Record the sale: (prepare receipt, make charge record, receive payment, make change).	42	40	62	R33	46	46	44
85093	Construct a plan for a vegetable garden including layout, variety of vegetables, estimates of maturing dates, etc.	R28	R30	R37	R22	R23	R15	R22
85094	Plan the installation of an overhead or underground sprinkler system for parks and/or grounds.	R28	R10	R12	R11	R30	R15	44
85095	Specify power (electric or other) needed to operate the proposed system.	R28	R10	R12	R11	R30	R15	44
85096	Install an underground sprinkler system in accordance with the plan.	42	R30	R37	R33	R38	R30	55
85097	Install an overhead sprinkler system in accordance with the plan.	R28	R20	R25	R22	R38	R23	55
85098	Install a mist system in the greenhouse.	R28	R20	R25	R22	R23	R23	R22
85099	Specify necessary water supply installations for satisfactory operation.	42	R20	R25	R22	R38	R30	44
85100	Recommend to customers the fertilizer, mowing, weed control, & disease & insect control practices to follow in maintaining lawns & grounds.	71	R30	R25	66	53	R23	55
85101	Maintain lawns in accordance with the directions of the customer.	71	R30	R25	66	76	R30	77
85102	Maintain shrubs in accordance with maintenance specifications.	71	R30	R25	77	69	R30	66
85103	Fertilize shrubs & flower borders in accordance with maintenance specifications.	71	40	R37	77	61	R30	66
85104	Control insects & diseases of shrubs & flower borders in accordance with maintenance specifications.	71	40	R37	77	69	R38	77
85105	Prune shrubs in accordance with the maintenance specifications.	85	40	R37	77	92	46	100
85106	Maintain trees through the use of fertilizers.	100	R30	R25	77	76	46	88
85107	Maintain trees by control of insects & diseases.	100	R30	R25	77	84	46	88
85108	Maintain trees through pruning.	100	R30	R25	77	76	46	88

Table S-7.--Continued.

Code Number	Job Skills	Selected Industries[a]						R=Rejected/Not Needed[b]
		Arbori-culture	Bedding Plants	Garden Center	Grounds-keeping	Land-scaping	Nursery Production	Turf and Sprinkler
		% (N=7)	% (N=10)	% (N=8)	% (N=9)	% (N=13)	% (N=13)	% (N=9)
85109	Maintain flower borders through the choice of perennials, blooming at different seasons during the year.	42	R30	R37	55	53	R30	55
85110	Estimate hours of labor required for grounds maintenance during a season.	71	R30	R12	44	53	R23	55
85111	Estimate the supplies needed for grounds maintenance during a season.	57	R30	R12	55	53	R23	66

[a]The 69 responses for the seven environmental horticulture occupational areas were reported from only 26 individuals, i.e., the mean number of environmental horticulture occupational areas reported per respondent was 2.7.

[b]If 40 percent or more of the respondents indicated a job skill was needed for entry, then the skill was accepted; if less than 40 percent, the skill was not needed (rejected). The prefix "R" indicates the percentage was less than 40 and, hence, the job skill was not needed (rejected) for job entry.

Table S-8.--Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into their Selected Industries in Environmental Horticulture.

Code Number	Job Knowledges	Selected Industries[a]							R=Review/Not Needed[b]
		Arbori-culture	Bedding Plants	Garden Center	Grounds-keeping	Land-scaping	Nursery Production	Turf and Sprinkler	
		% (N=7)	% (N=10)	% (N=8)	% (N=9)	% (N=13)	% (N=13)	% (N=9)	
85501	Proper time to make bud grafts.	R28	R 0	R 0	R 0	R 7	R 0	R11	
85502	Kinds of cuttings.	R28	R30	37	R 0	R 7	R23	R11	
85503	Environmental conditions needed for successful cuttings & grafts both before & after the process.	R28	R10	R25	R 0	R 7	R 7	R11	
85504	Media needed for growing rooted cuttings.	R14	R20	R25	R 0	R15	R23	R22	
85505	Effect of intensity of light on growing cuttings.	R 0	R10	R12	R 0	R 0	R 7	R 0	
85506	Effect of hours of light on growing cuttings.	R 0	R10	R12	R 0	R 0	R 7	R 0	
85507	Appropriate seeding conditions for various kinds of seeds.	R14	R10	R12	R 0	R15	R15	R22	
85508	Appropriate media for growing seedlings.	R14	R30	50	R 0	R23	38	33	
85509	How to control growth of plants through lighting.	R 0	R20	R25	R11	R15	R23	R22	
85510	Effects of temperature on growth of seedlings.	R14	R20	R25	R11	R23	R23	33	
85511	Characteristics of seedlings which indicate quality.	R14	R20	R25	R11	R30	R30	44	
85512	Effects of mositure on optimum growth of seedlings.	R14	R20	37	R11	R30	R30	44	
85513	Basic tree functions especially related to planting & pruning of trees & shrubs.	57	R30	R25	R22	46	R23	55	
85514	Soil characteristics related to growth of trees & shrubs.	R28	R30	R25	R22	38	R23	44	
85515	Fertilizer labeling.	42	R20	R12	33	38	R15	44	
85515	Responses of trees & shrubs to specific planting methods.	42	R30	R25	44	53	R30	66	
85517	Needs for pruning of trees & shrubs.	85	40	37	44	61	38	77	
85518	Timing of pruning of trees & shrubs.	71	40	37	44	61	38	77	
85519	Pruning tools.	71	40	37	44	61	38	66	
85520	Pruning safety practices.	71	R30	R25	33	53	R30	66	
85521	Fertilization methods for trees & shrubs.	42	40	37	33	61	38	77	
85522	Fertilization timing for trees & shrubs.	R28	40	42	33	53	38	66	
85523	Environmental relationships of grass & trees.	42	40	R25	33	R30	R15	33	
85524	Wound healing in trees.	71	R20	R12	33	38	R15	44	
85525	Tree wound dressings.	57	R30	R25	44	38	R23	44	
85526	Tools for cavity & wound treatment.	57	R30	R12	44	R30	R15	33	
85527	Disease control methods for trees & shrubs.	42	40	37	33	53	R30	66	
85528	Insect control methods for trees & shrubs.	42	40	37	33	61	38	77	

85529	Non-biological stresses affecting trees.	R14	R20	R25	R11	R15	R15	R11
85530	Read pesticide labels.	42	R30	37	33	53	39	55
85531	Planting techniques for trees & shrubs.	R28	R30	37	R22	61	38	66
85532	Planting timing for trees & shrubs.	R28	R30	37	R22	46	R30	55
85533	Nursery specifications for grading trees & shrubs.	R14	R20	R12	R22	R30	R15	33
85534	Pesticide safety regulations.	71	R30	37	44	53	38	55
85535	Optimum temperature for plants in the greenhouse.	R14	R10	R12	R 0	R 7	R 7	R11
85536	Optimum humidity for plants in the greenhouse.	R14	R10	R12	R 0	R 7	R 7	R11
85537	Optimum lighting for plants in the greenhouse.	R14	R10	R12	R 0	R 7	R 7	R11
85538	Appropriate fungicides for use in greenhouse.	R 0	R10	R25	R 0	R 7	R15	R11
85539	Appropriate insecticides for use in the greenhouse.	R 0	R10	R25	R 0	R 7	R15	R11
85540	Different water requirements in relation to different plants, container types, & planting media.	R 0	R30	62	R 0	R 7	R23	R11
85541	Forms of fertilizer, fertilizer analysis, rates of application & meaning of instructions on the package.	R14	R20	37	R 0	R23	R30	33
85542	Planting techniques such as depth to plant, spread of roots, size of hole, absence of air spaces, etc.	57	60	62	44	76	61	88
85543	How to read a plan.	42	40	37	33	61	R30	66
85544	Need for balance of leaf surface & root surface at planting time.	42	50	50	44	69	53	88
85545	Optimum season for planting nursery stock.	R28	50	37	44	53	46	66
85546	Characteristics of nursery stock which indicates quality.	R28	50	50	44	61	53	77
85547	Characteristics of plants in the nursery & how to relate them to customers situations.	42	R30	37	44	46	R23	55
85548	Significance of labels for identifying genus, species & variety.	57	40	50	55	61	38	66
85549	Local soil types & how they compare as to texture, drainage, pH, & fertility.	R28	40	37	44	53	36	66
85550	Various methods of transplanting & handling nursery stock & precautions necessary to assure success.	42	60	62	44	69	61	88
85551	Different peat mosses, mulches, & other soil amendment materials & the characteristics of each.	R28	50	50	33	38	R30	44
85552	How soil amendment materials may be used to improve various soil situations.	R28	40	37	33	38	R23	44
85553	Characteristics of seed bed for lawn to be seeded.	R14	R20	R25	R22	38	R23	55
85554	Various rates of seeding for grass seed.	R28	R30	R25	33	46	R23	55
85555	Appropriate base for lawn to be sodded.	R28	R30	R25	33	46	R23	55
85556	Kinds of protection needed by newly seeded lawn.	42	R30	R25	33	53	R23	66
85557	Moisture, shade & protection needed for establishment of seeded and/or sodded lawns.	42	R30	R25	55	53	R30	66
85558	Fertilizer formula-NPK & its application to lawn fertilization.	42	R30	...2	33	46	R15	55
85559	Chemicals for control of lawn weeds.	42	40	R25	55	46	R30	55

Table S-8.--Continued.

Code Number	Job Knowledges	Selected Industries[a] R=Review/Not Needed[b]						
		Arbori-culture	Bedding Plants	Garden Center	Grounds-keeping	Land-scaping	Nursery Production	Turf and Sprinkler
		% (N=7)	% (N=10)	% (N=8)	% (N=9)	% (N=13)	% (N=13)	% (N=9)
85560	Mowing & maintenance techniques for maintenance of a healthy lawn.	R28	40	37	44	61	46	77
85561	The weekly irrigation requirements of a lawn under varying intensity of use.	42	40	R25	33	38	R15	44
85562	How spray materials must be applied to be effective.	42	R30	37	44	53	R30	66
85563	How sprayers may be used to properly apply materials.	42	R30	37	44	61	38	77
85564	How dusters may be used to properly apply materials.	42	R30	37	44	53	R30	66
85565	How to use hedge shears for satisfactory work.	R28	R20	R12	44	R30	R15	33
85566	How to use pruning equipment to avoid unnecessary damage to plants.	57	R30	R25	44	46	R30	55
85567	How to use chain saws to avoid unnecessary damage to trees.	42	R30	R25	44	38	R30	44
85568	Safety practices to follow in the use of chain saws.	71	40	50	55	69	61	77
85569	Importance of adjustment of lawn mowers for satisfactory operation.	R14	40	37	33	46	46	55
85570	Basic principles of adjustment of power tillers.	R14	R30	R25	33	46	38	55
85571	Basic principles involved in the adjustment of garden tractors.	R14	R20	R12	33	R30	R15	33
85572	Safety factors to be followed in the operation of hand sprayers.	42	R30	R25	44	53	38	66
85573	Safety factors to be followed in the operation of compressed air sprayers.	42	R30	R25	44	46	R30	55
85574	Safety factors to be followed in the operation of power sprayers.	42	R30	R25	44	46	R30	55
85575	Safety factors to be followed in the operation of dusters.	42	R30	R25	44	46	R30	55
85576	Safety factors to be followed in the operation of lawn mowers.	42	R20	R12	44	46	R23	55
85577	Safety factors to be followed in the operation of power tillers.	42	R20	R12	44	46	R23	55
85578	Safety factors to be followed in the operation of garden tractors.	42	R20	R12	44	46	R23	55
85579	Basic steps in selling.	R14	R30	R25	R22	R15	R 7	R11
85580	How to compute dilutions of chemicals based on directions on label.	R14	50	75	33	53	53	66
85581	Function of equipment offered for sale.	R28	40	62	R22	38	38	44
85582	How various types of fertilizers & pesticides & herbicides function.	42	50	62	33	R30	R30	33

85583	Fundamentals of classification systems used for identification of plants, insects, & fungus diseases.	R28	50	75	44	38	38	44
85584	Kinds of safety practices to be followed in demonstrating garden equipment.	R28	40	37	33	53	38	66
85585	Types & characteristics of vegetables that can be grown in a home garden & how they may be cared for for optimum yield.	R28	R30	37	33	R23	R15	R22
85586	Coverage of each sprinkler head.	R14	R30	37	R22	R30	R30	33
85587	Pressure needed for satisfactory operation of proposed sprinkler system.	R14	R30	37	R22	R30	R30	33
85588	The power (electrical or other) needed for operation of proposed sprinkler system.	R14	R20	R25	R22	R30	R23	33
85589	The need for frost protection for the system.	R14	R30	37	R22	R23	R23	R22
85590	The opportunities for electrical & water supply controls available.	R28	40	R25	33	R30	R23	33
85591	The essential practices necessary for the maintenance of lawns.	42	R30	R25	44	46	R15	55
85592	Fertilizers to use for the maintenance of shrubs.	R28	R30	R25	44	38	R15	44
85593	Disease & insect control measures for the maintenance of shrubs.	R28	R30	R25	44	38	R15	44
85594	Pruning practices needed for the maintenance of shrubs.	71	R30	R25	55	61	R30	77
85595	Fertilizer to use for the maintenance of trees.	57	R30	R25	55	53	R23	66
85596	Disease & insect control measures for maintenance of trees.	57	R30	R25	55	46	R15	55
85597	Pruning practices for maintenance of trees.	71	R30	R25	66	61	R30	77
85598	Major perennial flowers for use as basic items in borders.	R28	R20	R 0	R22	R15	R 0	R11
85599	Periods of bloom & colors of basic items in the flower borders.	R28	R20	R 0	R22	R15	R 0	R11
85600	Time needed for completion of maintenace operations specified by the customer.	R28	R30	R12	33	R30	R 7	33
85601	Supplies (fertilizers, chemicals, annual & perennial plants, etc.) needed for maintenance of grounds according to specifications of the customers.	42	R30	R25	33	46	R15	55

[a]The 69 responses for the seven environmental horticulture occupational areas were reported from only 26 individuals, i.e., the mean number of environmental horticulture occupational areas reported per respondent was 2.7.

[b]If 33 percent or more of the respondents indicated a knowledge was "essential" for job entry, the job knowledge was accepted; if less than 33 percent, the knowledge was reviewed. When the job skill associated with the reviewed knowledge was accepted, the associated knowledge marked "review" was also accepted. However, if the job skill associated with the reviewed knowledge was rejected, the associated knowledge was also rejected.

Table S-9.--Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Farm Implement Repair.

Code Number	Job Skills	R=Rejected/ Not Needed[a] % (N=17)
85001	Identify diesel fueled internal combustion engine.	88
85002	Identify gasoline fueled internal combustion engine.	100
85003	Identify 4-stroke cycle engine.	88
85004	Identify 2-stroke cycle engine.	82
85005	Check & clean (or replace) the filters in the fuel line of a gasoline fueled engine.	94
85006	Clean the carburetor of a gasoline fueled engine.	94
85007	Adjust the carburetor of a gasoline fueled engine.	100
85008	Identify hand & power tools commonly used for farm implement repair.	100
85009	Correctly use hand & power tools commonly found in the farm implement repair shop.	100
85010	Observe & follow safety practices when working in the farm machinery repair shop.	100
85011	Set & adjust the controls on the oxy-acetylene welding equipment commonly found in the farm implement repair shop & for the kind of job to be done.	94
85012	Set & adjust the controls on the arc welding equipment commonly found in the farm implement repair shop & for the kind of job to be done.	94
85013	Select appropriate welding rods for the kind of job to be done.	88
85014	Prepare metal for welding.	94
85015	Perform the kind and/or position welds commonly needed for repair of farm implements.	82
85016	Strike an arc with various types of current.	82
85017	Shut down welding machine.	88
85018	Set the current for various types of metals: (a) alternating current, (b) straight polarity, (c) reverse polarity.	52
85019	Read charts for setting of equipment.	82
85020	Select correct size & shape of electrode for DSCP, DCRP, & AC current.	58
85021	Set amperage for welding various thicknesses of metal.	70
85022	Set the feed for feeding the wire into the arc.	R35
85023	Set the machine for arc cutting.	41
85024	Set the flame of the oxy-acetylene welder.	94
85025	Set the regulator of the oxy-acetylene welder: (a) correct air pressure & (b) correct gas pressure.	94
85026	Select correct torch tip for the job.	94
85027	Properly light the torch.	94
85028	Use the torch with correct positions & movements.	94
85029	Adjust oxy-acetylene flames for cutting metal.	94
85030	Accurately flame cut thin & thick steel sections.	88
85031	Adjust air & gas line on the regulator.	94
85032	Select correct cutting torch for cutting various metal sizes.	64
85033	Use cutting attachments for changing a welding torch to a cutting torch.	82
85034	Clean cutting tips.	88
85035	Use torch guides & mechanical guides.	64
85036	Select nozzle size for the job.	64
85037	Set inert gas for welding.	R29
85038	Set the water valve if torch is water cooled.	47
85039	Read the flow meter & understand CFH units of flow.	R23
85040	Select the best gas for the job.	47
85041	Correctly add welding rod metal to the weld.	64
85042	Use clamps & clamping fixtures.	76
85043	Cut metal (bevels, rivets, holes).	64
85044	Prepare joints for welding.	82
85045	Weld in horizontal, vertical & overhead positions.	70
85046	Weld pipe.	52
85047	Check, clean, or replace spark plugs.	100
85048	Check, clean, or replace distributor points or condenser.	100
85049	Check or replace coil.	100
85050	Check specific gravity of electrolyte & temperature compenstate in the reading.	94

85051	Perform a visual inspection of battery conditions.	94
85052	Install a battery.	94
85053	Clean battery terminals.	94
85054	Check charging system operation.	100
85055	Connect booster cables properly.	94
85056	Activate new dry-charged batteries.	94
85057	Charge batteries according to specifications.	94
85058	Check & set ignition timing.	100
85059	Inspect, replace, & adjust headlights & bulbs.	82
85060	Check and/or replace fuses.	82
85061	Check fluid level of battery cells & restore to proper level.	82
85062	Connect the generator-regulator tester into charging system.	76
85063	Locate wiring diagram in Service Manual & to trace out circuits.	76
85064	Perform a generator output test.	70
85065	Check voltage limiter setting & adjust.	64
85066	Check the current regulator setting & adjust.	64
85067	Check the cut-out relay operation & adjust.	64
85068	Test for voltage drop in the charging circuit.	64
85069	Repair & replace generator for service.	70
85070	Adjust belt tension.	82
85071	Visually inspect generator/regulator & connecting wiring.	76
85072	Disassemble & inspect generator.	76
85073	Check armature for shorts, opens, & grounds.	70
85074	Check field coils for shorts, opens, & grounds.	70
85075	Inspect & replace generator bearings.	70
85076	Replace generator brushes.	70
85077	Turn armature commutator on the lathe.	R35
85078	Undercut commutator mica-separators.	41
85079	Assemble & polarize the generator.	64
85080	Polarize generator field coils.	64
85081	Perform an alternator output test.	64
85082	Check field relay operation.	58
85083	Check voltage limiter setting.	52
85084	Repair and/or replace alternator for service.	58
85085	Visually inspect alternator, regulator, & connecting wiring.	82

85086	Disassemble & inspect alternator.	58
85087	Test rotor for opens, shorts, & grounds.	52
85088	Test stator for opens, shorts, & grounds.	52
85089	Check & replace alternator bearings.	64
85090	Replace alternator brushes.	64
85091	Test diodes with ohmmeter or test lamp.	58
85092	Replace diodes.	58
85093	Solder diode connecting leads.	58
85094	Assemble alternator.	64
85095	Adjust voltage limiter.	52
85096	Check starter draw using hand induction ammeter.	52
85097	Check starter draw using battery starter/tester.	52
85098	Isolate charging problem to ampere hour regulator or wiring.	R35
85099	Check for starter voltage drop.	52
85100	By-pass starter solenoid or switch to check operation.	82
85101	Remove & replace starter from vehicle.	94
85102	Remove & replace solenoid from starter.	94
85103	Replace starter solenoid contacts & terminals.	47
85104	Disassemble & inspect starter.	76
85105	Test armature for shorts, opens, & grounds.	58
85106	Test field coils for shorts, opens, & grounds.	58
85107	Replace starter bushings.	76
85108	Replace starter brushes.	70
85109	Turn commutator on the armature lathe.	44
85110	Bench test starter.	64
85111	Check operation of ignition by-pass.	58
85112	Check & replace starter drive.	76
85113	Use a test light to determine if voltage is present at a specified component.	88
85114	By-pass switches or relay to check for operation.	76
85115	Use a short-finder or similar method to locate grounds.	64
85116	Perform drilling, mounting & electrical work involved in mounting electrical accessories.	88
85117	Remove & replace electrical units such as radios, headlights, gas gages, etc.	94
85118	Use voltmeter, ammeter, and ohmeter to test circuits & components.	70

Table S-9.--Continued.

Code Number	Job Skills	R=Rejected/ Not Needed[a] % (N=17)
85119	Remove & replace various wiring harnesses using a service manual.	88
85120	Make a wire splicing with soldered joints or solderless connectors.	82
85121	Check dwell & rpm with tach-dwell meter & adjust to specifications.	70
85122	Set ignition timing & is able to find tune-up specifications in the shop manual.	88
85123	Check cooling system for leaks.	88
85124	Check and/or replace all belts as needed.	88
85125	Check level of coolant in radiator & adjust as needed.	88
85126	Drain & flush cooling system--winterize to minus 30°F.	82
85127	Flush & clean radiator.	76
85128	Replace seals or gaskets in the cooling system.	82
85129	Check & replace hoses in the cooling system.	88
85130	Check pressure caps on the radiator & replace as needed.	82
85131	Check thermostat & replace as needed.	94
85132	Inspect and/or replace water pump.	82
85133	Repair minor radiator leaks.	R35
85134	Test & determine antifreeze protection.	94
85135	Clean outside of radiator to assure cooling.	88
85136	Clean & maintain the cooling capacity of an air-cooled engine.	76
85137	Solder & repair leaks in the cooling system.	41
85138	Clean & inspect valves.	76
85139	Clean & inspect cylinder heads.	76
85140	Measure valve guide diameter & out-of-round.	58
85141	Knurl & ream valve guide to original diameter.	52
85142	Reface valves.	76
85143	Grind valve seats.	76
85144	Check valve seat contact.	76
85145	Check valve spring tension.	76
85146	Check timing of valve opening & closing in an internal combustion 4-cycle engine.	70
85147	Check seating of valve in an internal combustion 4-cycle engine.	76
85148	Adjust tappet clearance.	88
85149	Make cylinder compression tests.	88
85150	Time crankshaft & camshaft.	70
85151	Check & correct vital fluid levels (differential, transmission, engine) following the manufacturers recommendations.	100
85152	Change engine oil & filter.	100
85153	Change transmission & hydraulic fluid & filters.	100
85154	Check oil level in internal combustion engine.	100
85155	Change oil in internal combustion engine.	100
85156	Change oil filter in internal combustion engine.	94
85157	Clean and/or lubricate linkages in internal combustion engines.	70
85158	Clean & lubricate wheel bearings of tractors & other farm machines.	94
85159	Check & adjust brakes on tractors & other power driven farm machines.	82
85160	Determine when brakes need replacement or major repair.	82
85161	Check and/or replace fluid in hydraulic brake system.	82
85162	Clean-up & deglaze brake disks that have useable life left in them.	52
85163	Install seals & O-rings as required in brake systems.	58
85164	Check cylinder compression & interpret the readings (both wet & dry).	82
85165	Remove & replace the distributor.	82
85166	Check & adjust or replace distributor points & condensers.	88
85167	Adjust valves.	88
85168	Adjust idle speed & mixture.	88
85169	Check & replace air filter.	94

85170	Remove & replace power steering pump & bleed the system.	52
85171	Inspect cylinder head for warpage & cracks.	70
85172	Assemble cylinder heads.	70
85173	Remove & replace valve lifters.	70
85174	Inspect push rods for wear & trueness.	64
85175	Inspect & recondition rocker arm assembly.	70
85176	Align & install timing gears.	70
85177	Visually inspect camshaft & lifters.	70
85178	Measure camshaft journals to determine size & wear.	64
85179	Adjust solid lifter valve lash.	76
85180	Adjust hydraulic lifter lash.	64
85181	Disassemble & inspect engine visually.	76
85182	Remove & install cam bearings.	70
85183	Hone cylinder walls.	64
85184	Clean ring grooves.	76
85185	Check piston ring & gap.	76
85186	Check piston ring side clearance.	76
85187	Mike a piston to determine size.	76
85188	Mike the crankshaft to determine journal size, out-of-round & taper.	76
85189	Check crankshaft end play.	76
85190	Fit & install rear main bearing oil seal.	64
85191	Compress piston rings & install pistons.	76
85192	Check rod & main journal oil clearance.	70
85193	Remove & replace cylinder heads.	76
85194	Torque connecting rod caps.	70
85195	Check piston pin fit.	64
85196	Rebuild & check oil pump.	52
85197	Test fuel pump pressure, volume, & vacuum.	58
85198	Remove & replace fuel pump.	70
85199	Check, clean, and/or replace fuel filter.	76
85200	Bend & flare tubing to make fuel line.	76
85201	Remove & replace carburetor.	88
85202	Overhaul carburetor including: disassembling, cleaning, installing new parts, making all adjustments, re-assembling, test.	70
85203	Trouble shoot carburetor.	76

85204	Remove & replace intake manifold & heads.	76
85205	Disassemble cylinder heads.	70
85206	Determine length & size of V-belt for specified power transmission.	R35
85207	Install pulleys as specified for specific machines.	58
85208	Use service manual trouble shooting procedures for transmission.	76
85209	Disassemble, inspect, & reassemble transmission.	47
85210	Adjust the transmission bands of a fluid transmission system.	R31
85211	Adjust the linkage of a standard transmission system.	52
85212	Check level of transmission fluid.	94
85213	Change transmission fluid.	88
85214	Overhaul & repair universal joint assemblies & shields used in conjunction with universal joint power drives.	82
85215	Check operation of hydraulic lift and/or hydraulic system of other farm machines.	52
85216	Perform maintenance operations on the hydraulic system as specified in the manual.	70
85217	Identify seal & O-ring wear & to recognize what caused wear.	64
85218	Install or replace seals & O-rings using recommended practices & procedures.	70
85219	Overhaul & repair hydraulic cylinders common to agricultural hydraulic systems.	58
85220	Identify situations in which electric power is appropriate	47
85221	Lubricate electric motors.	70
85222	Determine size & type of electric motors for specified jobs.	R17
85223	Inflate tires.	94
85224	Add liquids to tires for increased weight.	82
85225	Change tire on tractor and/or other farm machinery & mount & dismount tires from rim.	88
85226	Replace tire valve stems.	82
85227	Repair tires (tubes & casings).	82
85228	Replace rear wheel bearings.	70
85229	Replace rear wheel grease seals.	76
85230	Change differential fluid.	88
85231	Check differential fluid level.	100
85232	Listen to customer statement of problem & identify cause of malfunction.	88

41

B

Table S-9.--Continued.

Code Number	Job Skills	R=Rejected/ Not Needed[a] % (N=17)
85233	Ask questions of the customer to help identify cause of malfunction.	88
85234	Explain to the customer what must be done to correct the malfunction.	76
85235	Explain to the customer what actually was done to correct the malfunction.	76
85236	Show replaced parts to the customer & explain need for replacement.	82
85237	Offer continued service and/or related merchandise to meet needs of the customer.	76
85238	Complete a service repair order.	70
85239	Translate the customer complaints or requests into mechanics instructions.	82
85240	Sell miscellaneous products	47
85241	Order parts & to follow-through on the parts ordered.	47
85242	Operate farm equipment commonly used in the area.	76
85243	Adjust farm equipment commonly used in the area.	82
85244	Disgnose malfunctioning of farm equipment.	76
85245	Identify defective parts on farm equipment.	82
85246	Replace defective parts on farm equipment.	88
85247	Locate the parts in the parts book.	76

[a]If 40 percent or more of the respondents indicated a skill was needed for job entry, the job skill was accepted: if less than 40 percent, the skill was declared "not needed" (rejected). The prefix "R" indicates the percentage was less than 40 and, hence, the skill was not needed (rejected) for job entry.

Table S-10.--Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into Farm Implement Repair.

Code Number	Job Knowledges	R=Review[a] % (N=17)
85501	Basic principles of operation of compression ignition engines.	70
85502	Basic principles of operation of spark ignition engines.	82
85503	Basic differences between diesel & gasoline fueled engines.	70
85504	Advantages & common agricultural uses of the various types of engines.	R29
85505	The specifications (directions) in the manual for cleaning and/or replacing filters in the fuel line of a gasoline fueled engine.	64
85506	The specifications (directions) in the manual for cleaning and/or adjusting the carburetor of a gasoline fueled engine.	47
85507	The kind & purpose of hand & power tools commonly found in the farm implement repair shop.	64
85508	The sizes & units of measurement of tools commonly used in the farm implement repair shop.	64
85509	The measuring instruments commonly used in the farm implement repair shop.	52
85510	The safety practices to be followed when using hand or power tools in the farm implement repair shop.	94
85511	The purpose of the controls on the oxy-acetylene welder.	58
85512	The purpose of the controls on the arc welder.	58
85513	The appropriate size & kind of rod for specified welding jobs.	R23
85514	The condition of metal needed for satisfactory welds on farm equipment.	R17
85515	The appropriate kind of welds commonly needed on farm equipment.	R17
85516	The use of tables & charts used in connection with welding jobs.	R11
85517	Settings of arc welder (amperage, voltage, polarity).	R23
85518	Polarity, direct & alternating current.	R11
85519	Safety practices for the welder.	82
85520	Safety practices to equipment when welding (fires, damage to buildings, livestock, etc.).	82
85521	The effect of heat on metals.	R23
85522	The characteristics of a satisfactory weld.	41
85523	The melting temperature of various metals used in farm machinery & equipment.	R 5
85524	The characteristics of appropriate oxy-acetylene flames for various purposes.	R11
85525	The various gases used for welding.	R 5
85526	Tables & charts for use in welding problems commonly found in repairing & maintaining farm machinery.	R17
85527	Materials & chemistry of battery operation.	R29
85528	Series & parallel circuits to increase battery output voltage or current flow.	47
85529	Reasons for battery preventive maintenance & results of neglect.	52
85530	The battery's function in the charging & starting system.	64
85531	The causes & results of battery sulfation.	35
85532	The safety precautions to be observed when charging & servicing a battery.	76
85533	Battery charging voltage as related to state of charge, charging rates, & battery condition.	R29
85534	Measurement & significance of specific gravity.	35
85535	The criteria used in selecting a replacement battery.	R11
85536	The use & operation of the generator-alternator-regulator tester.	R11
85537	The relationship between voltage, current, resistance, & power as stated by Ohm's Law.	R11
85538	Basic electricity & magnetism.	R17
85539	Operating principles of the DC generator & electromagnetic induction.	R17
85540	How to trace circuits in the wiring diagram.	R29
85541	Understands the use of & differences between "A" and "B" circuit generators.	R 5
85542	Direct & alternating current principles.	R17
85543	Electrical & equipment nomenclature.	R17
85544	The operation of the voltage & current limiters.	R11
85545	The operation of the cut-out relay.	R17
85546	Testing procedures for locating shorts, opens, or grounds in armature & field coils.	R23
85547	The procedure for isolating generator from regulator problems.	R17

85548	The use & operation of the armature lathe.	R 5
85549	Operation & use of neon-type timing lights.	35
85550	The different methods for adjusting regulator settings.	R 5
85551	The use of the volt meter in checking voltage drop.	R11
85552	The tailoring of the voltage regulator settings for specific applications.	R 5
85553	The principles involved in polarizing the generator.	R23
85554	The use & operation of the battery starter/tester.	R17
85555	Basic operating principles of the series wound motor.	R 5
85556	The test procedures for isolating starter problems.	R17
85557	Starter bench test procedures.	R11
85558	Starter drive operation.	R23
85559	Ignition resistor by-pass operation.	R11
85560	Wire size & current capacity.	R11
85561	The operation & servicing of fuses & circuit breakers.	R23
85562	Characteristics of series & parallel circuits.	R23
85563	Operating principles of switches, relays, solenoids, thermo electric switches & gages, d'Arsonval gages, pressure or heat sensitive switches.	R17
85564	The procedures for checking for & isolating a defective unit.	R29
85565	The operation & use of ammeter, ohmmeter, and voltmeter.	35
85566	The relationship between dwell & point gap.	41
85567	The relationship between dwell & timing.	47
85568	The interpretation & use of scope wave forms.	R 5
85569	Ignition timing & it's relationship to crankshaft position, engine speed, & load.	47
85570	The function of the ignition coil & condenser.	47
85571	Spark plug construction & selection.	47
85572	The condition of plug firing tip as an indicator of engine condition.	52
85573	Purpose & method of flushing cooling system.	52
85574	Instructions in the manual for servicing the cooling system.	58
85575	Instruction in manual governing adjustment of fan belt.	52
85576	Instruction in manual for checking & replacing water pump on an engine.	47
85577	Specifications in the manual for pressure to be maintained.	35
85578	Chemicals & equipment needed to clean & flush radiator.	R17
85579	Types & uses of gaskets & gasket remanents.	R23
85580	Flow of coolant through cooling system.	R29
85581	Types & uses of the various engine coolants & anti-freezes.	35

85582	Instructions in the manual for checking timing of valves in an internal combustion 4-cycle engine.	47
85583	Methods for checking seating of valves in an internal combustion 4-cycle engine.	35
85584	Specifications in the manual for grinding or replacement of valves.	47
85585	Interpretation & use of cylinder compression readings.	47
85586	The purpose & use of various types of valve guide oil seals.	R17
85587	Cylinder head design & construction.	R 5
85588	The use of the valve refacer.	47
85589	The use of the micrometer.	64
85590	Hydraulic & solid valve lifters & operation.	R29
85591	The valve train lubrication system.	R11
85592	Camshaft operation.	41
85593	Check procedures for timing gears.	52
85594	Valve timing & methods for checking.	41
85595	The need for valve lash.	58
35596	Directions in manual for checking and/or changing oil in internal combustion engine.	76
85597	Code specifications for weights & grades of oil specified in manual.	52
85598	Instructions in manual for cleaning & lubricating internal combustion engine.	52
85599	Instruction in manual for checking & replacing transmission & hydraulic fluid.	52
85600	Code designations for transmission fluids.	41
85601	Instructions in manual for checking and/or changing lubricant in differential of tractors and/or other farm machines.	58
85602	Method & specifications for cleaning, lubricating, & adjusting wheel bearings in tractors & other farm machines.	64
85603	Manual specifications for wheel bearings for the specific machine.	35
85604	Manual specifications for adjustment of brakes.	35
85605	Specifications in manual regarding condition of brake linings.	R23
85606	Specifications in manual regarding choice & use of hydraulic brake fluid.	R29
85607	Use of cylinder compression readings.	58
85608	Cylinder design & construction.	R23
85609	Engine operation & construction (2 & 4 cycle).	47

Table S-10.--Continued.

Code Number	Job Knowledges	R=Review[a] % (N=17)
85610	Other types of engines.	R11
85611	Engine block construction & common wear points.	R11
85612	Cylinder wall measuring & resurfacing.	R23
85613	Heat, expansion, & contraction of metals.	R11
85614	The composition of engine bearings.	R11
85615	Operating conditions of engine bearings.	R17
85616	Piston & rod construction & rebuilding procedure.	R23
85617	Oil clearance & its measurement.	52
85618	The engine lubrication system.	58
85619	Procedures for checking the oil pump.	R29
85620	Crankshaft construction & operation.	35
85621	The use of the manufacturers specifications & tolerances.	70
85622	The measurements & inspection of a crankshaft.	52
85623	Piston ring classification & construction.	R29
85624	The use of a torque wrench.	70
85625	The ignition timing & methods of checking.	64
85626	Fuel pump construction & operation.	R23
85627	Fuel pump testing procedure.	R23
85628	Carburetor construction.	R29
85629	Carburetor test & adjustment procedures.	35
85630	How to measure for length of belt needed.	R29
85631	How to determine size of V-belt needed for specified pulleys.	R23
85632	The instructions in the manual for the transmission system being serviced.	35
85633	The instructions in the manual for adjusting a standard transmission system.	R29
85634	Specifications of transmission fluid for the specific machine.	35
85635	Principles of bearing adjustment.	R23
85636	Appropriate manual for specifications regarding performance of the system.	R29
85637	Tolerances for parts of hydraulic system as specified in the manual.	R17
85638	Specifications for parts of the hydraulic system as specified in the manual.	R23
85639	Characteristics of electric power that give it advantages over power from internal combustion engines.	R11
85640	Potential danger to motors by over lubricating.	R17
85641	Basic controls for electric equipment as thermostats, pressure switches, time clocks, etc.	R 5
85642	Ability of electric motors of various types to start under load.	R 5
85643	Ability of electric motors to operate under continuous load.	R 5
85644	Kinds of motors to use under hazardous conditions (as in wet conditions, in dusty atmosphere, etc.).	R17
85645	Relationship of size of wire, distance, & voltage to carrying capacity of wire.	R11
85646	Kinds of controls available & functions of each kind.	R 5
85547	Need for proper inflation of tires.	58
85648	Inflation directions for tires of machinery being serviced.	58
85649	Materials to use for adding weight to tires.	52
85650	How to relate customer statements to typical malfunction.	R23
85651	Kinds of questions to ask to bring out common causes of malfunction.	R29
85652	How to translate the job to be done into language the customer can understand.	R29
85653	How to explain what was done so that the customer is satisfied the job was completed efficiently & satisfactorily.	35
85654	Needs of the customer for additional services.	R23
85655	Needs of the customer for related merchandise.	R17
85656	The use of a service repair order.	R23
85657	Common complaints & problems & the way in which the complaints should be written.	R23
85658	The commonly sold related parts.	R11
85659	The parts ordering procedure.	R 5

85660	The ways of assigning work to various mechanics.	R 5
85661	The function of each piece of farm equipment used in the area.	35
85662	When the farm equipment is operating correctly.	35
85663	The relationship of the various parts of each piece of equipment so that defects can be quickly detected.	R29
85664	The parts catalogs of various farm machinery companies.	R11
85665	The use of the manual in adjusting pieces of farm equipment for optimum operation.	25

[a]If 33 percent or more of the respondents indicated a knowledge was "essential" for job entry, the job knowledge was accepted; if less than 33 percent, the knowledge was reviewed. When the job skill associated with the reviewed knowledge was accepted, the associated knowledge marked "review" was also accepted. However, if the job skill associated with the reviewed knowledge was rejected, the associated knowledge was also rejected.

Table S-11.--Percentage Distribution of Job Skills Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Biological-Technical Services in Agriculture.

Code Number	Job Skills	Selected Industries[a]						R=Rejected/Not Needed[b]
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources	
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)	
85001	Approach, handle, & work with live animals to prevent personal injury.	40	80	R20	80	R11	R16	
85002	Approach, handle, & work with live animals & birds in a humane way.	40	80	R20	80	R11	R16	
85003	Diplomatically approach people when enforcing laws & regulations.	40	80	40	40	R33	50	
85004	Clean & sterilize laboratory glassware, equipment, & instruments used in administering prescribed medicines & treatments to animals & birds.	R20	60	R10	60	R11	R16	
85005	Prepare & read the results of bacteria & mold cultures.	R 0	40	R10	R20	R22	R33	
85006	Take blood samples.	R 0	R 0	R 0	R20	R 0	R 0	
85007	Perform blood testing procedures.	R 0	R20	R 0	R20	R 0	R 0	
85008	Maintain breeding records of animals & birds.	R20	60	R10	40	R11	R16	
85009	Recognize early signs of abnormal health conditions in animals & birds.	40	60	R10	80	R11	R16	
85010	Administer medication as prescribed.	R20	60	R10	60	R11	R16	
85011	Dehorn animals when needed.	R20	R 0	R10	60	R 0	R 0	
85012	Castrate animals.	R20	R 0	R10	40	R 0	R 0	
85013	Dock lambs & remove tails from pigs.	R20	R 0	R10	40	R 0	R 0	
85014	Formulate rations as directed.	40	80	R10	80	R11	R16	
85015	Observe animals for heat & signs of parturition.	R20	60	R10	60	R 0	R 0	
85016	Assist animals in parturition.	R20	40	R10	60	R 0	R 0	
85017	Treat newborn animals to prevent infection.	R20	40	R10	60	R 0	R 0	
85018	Assist newborn animals to nurse.	R20	40	R10	60	R 0	R 0	
85019	Give animals or birds prescribed injections to prevent diseases & nutritional deficiencies.	R20	R20	R10	60	R 0	R 0	
85020	Remove needle teeth of young pigs.	R20	R 0	R10	60	R 0	R 0	
85021	Shear sheep.	R 0	R 0	R 0	40	R 0	R 0	
85022	Maintain shears, clippers, drench guns, & syringes in good repair.	R20	60	R10	60	R11	R16	
85023	Maintain animals & birds in sanitary conditions.	R20	100	R20	60	R11	R16	
85024	Restrain animals & birds for minor surgery & medical treatment.	R20	80	R10	40	R 0	R 0	

85025	Properly prepare & move animals & birds ready for shipment.	R20	60	R20	60	R11	R16
85026	Groom & exhibit animals & birds (pure bred herds & flocks).	R20	R20	R10	R20	R11	R16
85027	Artificially inseminate animals.	R 0	R 0	R 0	R20	R 0	R 0
85028	Grade wool.	R 0	R 0	R 0	R20	R 0	R 0
85029	Recognize & treat for internal parasites.	R20	60	R10	60	R11	R16
85030	Recognize & treat for external parasites.	R20	80	R10	60	R11	R16
85031	Attach milking machines properly.	R20	R20	R10	60	R 0	R 0
85032	Cool & store milk properly.	R20	R20	R10	60	R 0	R 0
85033	Clean & sterilize milking machines, pipelines, & milk storage equipment.	R20	R20	R20	60	R11	R 0
85034	Maintain milking animals in sanitary conditions (including proper clipping).	40	R20	R10	80	R 0	R 0
85035	Formulate rations & feed according to production of the animal or bird.	40	R20	R10	100	R 0	R 0
85036	Formulate diets for animals or birds following prescribed instructions.	40	60	R10	80	R11	R16
85037	Properly formulate & administer diets & special treatments for animals & birds.	R 0	R20	R 0	60	R 0	R 0
85038	Assist in sacrificing laboratory animals or birds under the supervision of a research assistant for the purpose of collecting experimental data.	R 0	R20	R 0	R20	R11	R16
85039	Carry out breeding, feeding, & management programs for animals & birds.	R20	60	R10	80	R11	R16
85040	Prepare animals for surgery under the supervision of a veterinarian or research worker.	R 0	60	R 0	R 0	R 0	R 0
85041	Perform surgery on animals under the supervision of a veterinarian or research assistant.	R 0	R 0	R 0	R 0	R 0	R 0
85042	Collect semen for preservation & use.	R 0	R 0	R 0	R20	R 0	R 0
85043	Process semen for preservation & use.	R 0	R20	R 0	R20	R 0	R 0
85044	Prepare processed semen for shipment.	R 0	R 0	R 0	R20	R 0	R 0
85045	Feed & care for animals at animal breeding units (studs).	R 0	40	R 0	40	R11	R16
85046	Sell semen to prospective users.	R 0	R 0	R 0	R20	R 0	R 0
85047	Recognize unsanitary conditions at stockyards & in trucks transporting livestock.	R20	R20	R20	80	R 0	R 0
85048	Recognize unsanitary conditions in pet stores, animal pounds, & kennels.	R20	60	R10	60	R11	R16
85049	Recognize inhumane treatment of animals & birds.	R20	60	R20	60	R11	R16
85050	Recognize abnormal health conditions in live animals & birds to be slaughtered for human consumption.	R20	R20	R20	80	R 0	R 0
85051	Recognize abnormal conditions in meat animals during slaughter for human consumption.	R20	R 0	R20	80	R 0	R 0
85052	Recognize unsanitary conditions in slaughter houses & meat processing plants.	40	R20	R30	80	R11	R16

Table S-11.--Continued.

Code Number	Job Skills	Selected Industries[a]				R=Rejected/Not Needed[b]	
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)
85053	Recognize unsanitary conditions in dairy plants & on dairy farms.	60	R20	R30	80	R33	R33
85054	Perform tests for presence of Brucellosis.	R 0	R 0	R 0	R20	R 0	R 0
85055	Prepare cultures for cottage cheese, sour cream, & buttermilk.	R 0	R 0	R10	R20	R11	R 0
85056	Prepare milk for cheese, sour cream, & buttermilk.	R 0	R 0	R10	R20	R11	R 0
85057	Pasturize milk.	R 0	R 0	R10	R20	R11	R 0
85058	Sanitize dairy plant equipment.	R20	R 0	R20	40	R22	R16
85059	Test milk for butterfat.	R 0	R 0	R10	40	R11	R 0
85060	Test milk for solids not fat.	R 0	R 0	R10	40	R11	R 0
85061	Test milk products for acidity.	R 0	R 0	R10	40	R11	R 0
85062	Compute production records for dairy cows.	R20	R20	R10	60	R 0	R 0
85063	Advise on proper arrangement of milking equipment on dairy farms & in the milk house.	R20	R 0	R10	40	R 0	R 0
85064	Recognize dairy herd health problems resulting from improper operation of milking equipment & procedures.	R20	R20	R20	60	R11	R 0
85065	Operate an incubator.	R 0	R20	R 0	40	R 0	R 0
85066	Blood test birds.	R 0	R 0	R 0	R20	R 0	R 0
85067	Carry out prescribed vaccination programs.	R20	R 0	R10	60	R 0	R 0
85068	Pelt fur animals.	R20	R 0	R10	40	R 0	R 0
85069	Keep breeding records on fur bearing animals.	R20	R20	R10	60	R 0	R 0
85070	De-beak chicks.	R20	R 0	R10	60	R 0	R 0
85071	"Dub" chicks.	R20	R 0	R10	60	R 0	R 0
85072	Grade eggs.	R20	R 0	R10	60	R 0	R 0
85073	Check eggs for fertility.	R20	R20	R10	40	R 0	R 0
85074	Break beef, swine, & lamb carcasses into wholesale cuts.	R 0	R20	R10	R20	R 0	R 0
85075	Identify kinds of meat commonly offered on the meat market.	R20	R20	R20	40	R 0	R 0
85076	Test meat & meat products for moisture.	R 0	R20	R10	R20	R 0	R 0
85077	Test meat & meat products for fat content.	R 0	R20	R10	R20	R 0	R 0
85078	Select & blend meats & other ingredients for processed meats according to a prescribed formula.	R 0	R20	R10	R20	R 0	R 0
85079	Cure fresh & processed meats.	R 0	R 0	R 0	R20	R 0	R 0

85080	Cut up poultry carcasses.	R20	R 0	R10	40	R 0	R 0
85081	Take samples of water supplies & run-off to test for contamination by agricultural chemical residues.	40	R20	40	R20	55	66
85082	Take samples of water supplies to test for use in processing fruit & vegetable products.	40	R20	40	R20	44	66
85083	Take samples of water supplies to test for contamination from plants and/or animal residues.	R20	R20	R30	R20	55	50
85084	Take samples of water to test for mineral content.	R 0	R20	R20	R20	R33	R33
85085	Make & record condition of private wells & to report potential sources of contamination.	R20	R20	R20	R20	44	50
85086	Clean & sterilize glassware & other utensils for testing water.	R 0	R20	R20	R20	44	R33
85087	Determine evidence of contamination of water supplies due to seepage through the soil.	R20	R20	R30	R20	55	50
85088	Construct a water disposal system under supervision.	R20	R 0	R30	R20	44	50
85089	Take samples of water to test for presence of phosphates & heavy metals (cadmium, mercury, etc.)	R20	R20	R30	R20	55	50
85090	Prepare samples of forage for grading.	R20	R 0	R10	60	R 0	R 0
85091	Prepare samples of forage for testing residues.	60	R 0	R20	60	R22	R33
85092	Identify kinds of forages.	40	R20	R10	60	R22	R33
85093	Prepare a sample of forages to determine nutritive value.	40	R 0	R10	60	R11	R16
85094	Identify weed & other plant mixtures & contaminants in forage samples.	40	R 0	R10	40	R11	R16
85095	Prepare forage samples for testing of moisture.	40	R 0	R10	40	R11	R16
85096	Collect & prepare samples of silage to test for acidity.	40	R 0	R10	60	R11	R16
85097	Collect & prepare samples of forage to test for fiber content.	40	R 0	R10	40	R11	R16
85098	Determine when forage is dried enough for baling or harvesting.	40	R 0	R10	60	R11	R16
85099	Sample experimental plots under the direction of a supervisor.	60	R 0	R20	40	R22	R33
85100	Interpret seed analysis data on the package of forage crop seed.	40	R 0	R10	40	R11	R16
85101	Analyze a sample of forage crop seeds for purity & contamination.	40	R 0	R10	60	R11	R16
85102	Inoculate legume seeds preparatory to planting.	R20	R 0	R10	60	R 0	R 0
85103	Recognize effects of herbicide residues on succeeding crops.	40	R 0	R30	60	R11	R16
85104	Perform germination test on forage crop seeds.	R20	R 0	R10	40	R 0	R 0
85105	Inspect fields of forage crops & rouge diseased and/or undesirable plants under the direction of a supervisor.	40	R 0	R20	60	R11	R16
85106	Identify insect & nematode damage in vegetable & potato crops.	40	R 0	40	40	R11	R16
85107	Recognize potential insect damage & recommend preventive measures.	R20	R 0	R20	R20	R11	R16
85108	Recognize disease damage of vegetable & potato crops & recommend control measures.	40	R 0	40	R20	R22	R33
85109	Inspect fields of vegetables and/or potatoes & rouge diseased plants under the direction of a supervisor.	R20	R 0	R10	40	R11	R16
85110	Inspect and/or test vegetables or potatoes to determine optimum harvest time.	R20	R 0	R30	40	R11	R16

51

B

Table S-11.--Continued.

Code Number	Job Skills	Selected Industries[a]						R=Rejected/Not Needed[b]
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources	
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)	
85111	Inspect vegetables & potatoes for conformity to grade.	40	R 0	40	40	R22	R33	
85112	Prescribe storage conditions for fresh vegetables and/or potatoes.	40	R 0	40	40	R22	R33	
85113	Prescribe varieties of vegetables and/or potatoes for specific purposes (canning, freezing, fresh use, etc.).	R20	R 0	R20	40	R11	R16	
85114	Identify species of vegetable seeds commonly used in the area.	R20	R 0	R20	40	R11	R16	
85115	Sample vegetable seeds for analysis for purity & germination.	R 0	R 0	R 0	40	R 0	R 0	
85116	Sample experimental plots of vegetables or potatoes under the direction of the supervisor.	R20	R 0	R10	40	R11	R16	
85117	Identify varieties of potato tubers commonly grown in the area.	R20	R 0	R10	40	R11	R16	
85118	Identify insect damage in fruits.	40	R 0	50	40	R22	R33	
85119	Assist in determining potential insect build-up & recommend preventive measures.	40	R 0	R20	R20	R22	R33	
85120	Identify diseases of fruit trees, bushes & vines & recommend control measures.	60	R 0	40	40	R22	R33	
85121	Remove infected trees & plants as specified by qualified inspectors.	40	R 0	R10	R20	R22	R33	
85122	Prepare samples of fruits for testing for sugar and/or acidity.	R 0	R 0	R20	R20	R 0	R 0	
85123	Check fruits for optimum harvest time.	40	R 0	40	R20	R22	R33	
85124	Prepare samples of fruits for check on conformity to grade.	40	R 0	R30	R20	R22	R33	
85125	Inspect fruits for evidence of diseases, insects, or mechanical injury.	60	R 0	50	R20	R33	50	
85126	Prepare samples of fruits for test for chemical residues.	60	R 0	40	R20	R33	50	
85127	Store fruits under prescribed conditions of temperature, humidity, atmospheric conditions.	40	R 0	R30	R20	R22	R33	
85128	Select fruits for various commerical uses (fruits to be used for canning, freezing, wine making, or sold for retailing as fresh fruit, etc.).	40	R 0	40	R20	R22	R33	
85129	Recommend specific varieties of fruits to meet specific market demands.	R20	R 0	R20	R20	R11	R16	
85130	Prepare fruits for wine making.	R 0	R 0	R10	R20	R 0	R 0	
85131	Inoculate fruit juices for fermentation under direction of a supervisor.	R 0	R 0	R10	R20	R 0	R 0	
85132	Check results of experimental projects under the direction of a supervisor.	60	R 0	R20	R20	R33	50	

85133	Prepare samples for determining protein content of shelled corn, grains, & beans.	R20	R 0	R 0	60	R11	R16
85134	Prepare samples for determining fat content of corn, grains, & beans.	R 0	R 0	R 0	60	R 0	R 0
85135	Prepare samples for determining carbohydrate content of grain & beans.	R 0	R 0	R 0	60	R 0	R 0
85136	Prepare samples for determining moisture content of grains & beans.	40	R 0	R 0	80	R11	R16
85137	Determine germination rate of seeds.	40	R 0	R10	60	R11	R16
85138	Prepare samples for determining percent of damaged kernels in grain & bean samples.	40	R 0	R10	80	R11	R16
85139	Cross-pollinate corn under the direction of a supervisor.	40	R 0	R 0	40	R11	R16
85140	Dry grains & beans.	40	R 0	R10	60	R11	R16
85141	Treat seed grains & beans for prevention of diseases under the direction of a supervisor.	60	R 0	R20	60	R22	R33
85142	Prepare samples of grains and/or beans for determination of grade.	R20	R 0	R 0	60	R11	R16
85143	Identify evidence of insect damage in growing grain.	60	R 0	R20	40	R22	R33
85144	Recognize indication of diseases in growing grain or beans.	60	R 0	R20	60	R22	R33
85145	Apply controls for insects or diseases affecting growing grain or beans under the direction of a supervisor.	60	R 0	R20	60	R22	R33
85146	Apply controls of insects affecting grain or beans in the bin or crib under the direction of a supervisor.	60	R 0	R20	60	R22	R33
85147	Determine time to harvest sweet corn for optimum quality.	R20	R 0	R 0	R20	R11	R16
85148	Determine mositure content in popcorn for optimum popping.	R20	R 0	R 0	R20	R11	R16
85149	Prepare samples of grains or beans for determining appropriate market grade.	R 0	R 0	R 0	60	R 0	R 0
85150	Prepare samples of grains or beans for checking for weight per bushel.	R20	R 0	R 0	40	R11	R16
85151	Prepare samples of grains or beans to check for contamination.	R20	R 0	R10	60	R11	R16
85152	Prepare samples of grains or beans for checking for mechanical damage.	40	R 0	R10	40	R22	R33
85153	Collect samples of grain or beans for analysis.	R20	R 0	R 0	40	R11	R16
85154	Allocate various classes of grains or beans to appropriate market uses.	R20	R 0	R 0	40	R11	R16
85155	Sample experimental plots under the direction of a supervisor.	60	R 0	R10	40	R22	R33
85156	Mix & grind feed grain & supplements to specifications.	R 0	R 0	R 0	60	R 0	R 0
85157	Inspect fields for certified seed production under the direction of a qualified supervisor.	R20	R 0	R 0	R20	R11	R16
85158	Prepare samples of seeds for certification.	R 0	R 0	R 0	R20	R 0	R 0
85159	Inspect fields of grain or beans & rogue diseased and/or undesirable plants under the direction of a supervisor.	40	R 0	R10	R20	R22	R33
85160	Specify soil preparation & seeding for a lawn appropriate for the area.	40	R 0	R10	R20	R33	50

53

8

Table S-11.--Continued.

Code Number	Job Skills	Selected Industries[a]				R=Rejected/Not Needed[b]	
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)
85161	Choose appropriate varieties of lawn grasses for specified conditions.	R20	R 0	R10	R20	R22	R33
85162	Specify mowing procedures appropriate for various kinds of established lawns.	R20	R 0	R10	R20	R22	R33
85163	Take soil samples to test for nutrients.	60	R 0	50	40	R33	50
85164	Take soil samples to identify soil types.	40	R 0	R10	40	R22	R33
85165	Test soils for nutrients under the direction of qualified supervisor.	R20	R 0	R 0	R20	R11	R16
85166	Test soils for pH under the direction of a qualified supervisor.	40	R 0	R10	40	R22	R33
85167	Prepare samples of soil for testing for organic matter content.	40	R 0	R10	40	R11	R16
85168	Select & apply materials to modify pH of soils to desired levels under direction of a qualified supervisor.	40	R 0	R20	40	R11	R16
85169	Determine moisture level in soils using approved testing equipment.	R 0	R 0	R10	R20	R22	R33
85170	Apply a quantity of irrigation water specified by a supervisor.	40	R 0	R20	R20	44	66
85171	Test, collect, & prepare soil run-off samples for pollutants.	R20	R 0	R20	R20	R33	50
85172	Apply, under supervision, prescribed quantities of plant nutrients for specific returns.	60	R 0	R20	40	R33	50
85173	Apply, under supervision, kinds of soil modifying materials to accomplish specified results.	40	R 0	R10	R20	R33	50
85174	Sterilize soil for greenhouse as specified by a supervisor.	R 0	R 0	R 0	R20	R 0	R 0
85175	Carry out practices for control of soil erosion as prescribed by a supervisor.	40	R 0	R10	40	R22	R33
85176	Demonstrate practices recommended to control soil erosion on the soils of the area.	40	R 0	R20	R20	44	66
85177	Identify soil capability classes.	40	R 0	R10	R20	R33	50
85178	Recommend appropriate crops in line with the soil capability classes.	40	R 0	R10	40	R33	50
85179	Lay out experimental plots under the direction of a supervisor.	40	R 0	R10	R20	R33	50
85180	Sample & measure results of experimental plots under the direction of a supervisor.	40	R 0	R10	R20	R33	50
85181	Follow a specified program of lawn fertilization & irrigation.	40	R 0	R10	R20	R33	50
85182	Establish a program of weed control based on recommendations of the Cooperative Extension Service or other reliable agency.	40	R 0	R10	40	R22	R33
85183	Set up artificial lights for growing plants according to specifications.	40	R 0	R10	R20	R22	R33

85184	Set up a hydroponics system according to specifications.	R 0	R 0	R 0	R20	R 0	R 0
85185	Arrange lighting system according to specifications to control time of blooming of plants.	R 0	R 0	R 0	R20	R 0	R 0
85186	Adjust temperature controls to control plant growth.	R 0	R 0	R 0	R20	R 0	R 0
85187	Prepare & apply hormones to control plant growth according to specifications.	R 0	R 0	R 0	R20	R 0	R 0
85188	Create specified climate for various types of plants.	R 0	R 0	R 0	R20	R 0	R 0
85189	Sterilize soil for greenhouse and/or experimental work.	R20	R 0	R10	R20	R11	R16
85190	Establish a schedule to produce specified crops at specified times.	R20	R 0	R 0	R20	R22	R33
85191	Control plant disease & insects in the greenhouse.	40	R 0	R10	R20	R22	R33
85192	Mix & apply chemicals to greenhouse plants for control of diseases & insects.	40	R 0	R10	R20	R22	R33
85193	Make tissue tests of plants to determine nutrient level & needs.	60	R 0	R20	40	R22	R33
85194	Meet nutrient needs of plants by folier feeding.	60	R 0	R20	40	R22	R33
85195	Meet nutrient needs of plants by application of nutrients to the soil.	60	R 0	R20	40	R33	50
85196	Grow seedlings for experimental purposes, under the direction of a supervisor.	60	R 0	R20	40	R33	50

[a]The 40 responses for the six selected industries in the Biological-Technical Services in Agriculture were reported from only 23 individuals, i.e., the mean number of industries per respondent was 1.7.

[b]If 40 percent or more of the respondents indicated a skill was needed for job entry, the job skill was accepted; if less than 40 percent, the skill was declared "not needed" (rejected). The prefix "R" indicates the percentage was less than 40 and, hence, the skill was not needed (rejected) for job entry.

Table S-12.--Percentage Distribution of Job Knowledges Needed, or Not Needed, by Respondents for Occupational Entry into Their Selected Industries in Biological-Technical Services in Agriculture.

Code Number	Job Knowledges	Selected Industries[a]						R=Review[b]
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources	
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)	
85501	The temperament of the animals or birds being studied.	R 0	60	R 0	R20	R11	R16	
85502	The correct way to approach animals or birds.	R 0	60	R 0	R20	R11	R16	
85503	The correct use of restraining techniques & devices.	R 0	40	R 0	R20	R11	R15	
85504	The use of protective devices.	R 0	R20	R 0	R20	R11	R16	
85505	The necessary precautions to take in handling animals or birds suspected of disease or sickness.	R20	40	R10	40	R11	R16	
85506	Which diseases are communicable to man & by what methods.	R20	R20	R10	60	R11	R16	
85507	The limit of stress for the animal or bird being handled.	R 0	R20	R 0	R 0	R 0	R 0	
85508	The laws & regulations governing the care & treatment of animals & birds.	R 0	R20	R 0	40	R11	R16	
85509	Different ways people may react when informed of violations of laws or regulations regarding animals & birds.	R 0	R 0	R 0	R 0	R 0	R 0	
85510	The importance of obtaining cooperation without the use of threats or the force of the law.	R20	R 0	R10	R 0	R11	R16	
85511	The need for clean & sterilized laboratory equipment.	R 0	80	R 0	R 0	R11	R16	
85512	The materials & techniques used in cleaning & sterilizing glassware & equipment.	R 0	40	R 0	R 0	R11	R16	
85513	Materials used in making laboratory cultures.	R 0	40	R 0	R 0	R11	R16	
85514	Techniques used in making laboratory cultures.	R 0	R20	R 0	R 0	R11	R16	
85515	How to determine & record results of laboratory cultures.	R 0	R20	R 0	R 0	R11	R16	
85516	The basic anatomy & physiology of the animal or bird being worked with.	R 0	R20	R 0	R 0	R11	R16	
85517	How to preserve blood samples.	R 0	R20	R 0	R 0	R 0	R 0	
85518	Exact procedure to perform tests being made.	R 0	40	R 0	R 0	R11	R16	
85519	How to record & interpret observations of tests made.	R 0	R20	R 0	R20	R11	R16	
85520	Importance of maintaining accurate breeding records.	R 0	40	R 0	R20	R11	R16	
85521	Methods of recording data related to breeding, production, health, & reaction of animals or birds.	R 0	R 0	R 0	R20	R 0	R 0	
85522	How to prepare breeding certificates & applications for registration papers.	R 0	R 0	R 0	R 0	R 0	R 0	
85523	Normal health behavior of animals or birds.	R 0	60	R 0	R20	R11	R16	

85524	How to recognize abnormal behavior & relate it to the health of animals or birds.	R 0	R20	R 0	R20	R11	R16
85525	Cautions to be observed when administering medication to animals or birds.	R 0	60	R 0	40	R11	R16
85526	Reasons for dehorning cattle.	R 0	R 0	R 0	R20	R 0	R 0
85527	The use of various dehorning methods & devices.	R 0	R 0	R 0	R20	R 0	R 0
85528	The need for close observation of animals following dehorning.	R 0	R20	R 0	40	R 0	R 0
85529	Basic reproductive anatomy of animals to be castrated.	R 0	R 0	R 0	R20	R 0	R 0
85530	The use of the equipment for castrating animals.	R 0	R 0	R 0	R 0	R 0	R 0
85531	The need for sanitary conditions for castrating animals.	R 0	40	R 0	40	R 0	R 0
85532	The reasons for treatment of wounds following castration.	R20	R20	R10	40	R 0	R 0
85533	The need for docking lambs & removing tails from pigs.	R 0	R 0	R 0	R 0	R 0	R 0
85534	The need for proper use of disinfectants when docking lambs & removing tails from pigs.	R 0	R 0	R 0	R20	R 0	R 0
85535	The kinds & use of instruments for docking lambs & removing tails from pigs.	R 0	R 0	R 0	R 0	R 0	R 0
85536	Importance of proper formulation of feeds.	R 0	60	R 0	R20	R11	R16
85537	Importance of checking labels on all ingredients used in formulating feeds.	R 0	40	R 0	40	R11	R16
85538	Use of control panel for formulation of feeds.	R 0	R [illegible]	R 0	R20	R 0	R 0
85539	Signs of heat & parturition.	R 0	R20	R 0	R 0	R 0	R 0
85540	Basic anatomy of female reproductive tract.	R 0	40	R 0	R 0	R11	R16
85541	Proper position of young animal at time of parturition.	R 0	R 0	R 0	R 0	R 0	R 0
85542	Procedures for assisting animals at time of parturition.	R 0	R 0	R 0	R20	R 0	R 0
85543	Need for thorough sanitation when assisting animal at parturition.	R 0	40	R 0	R20	R 0	R 0
85544	How infections enter newborn animal or bird.	R 0	R20	R 0	R20	R 0	R 0
85545	Correct use of disinfectants in treating newborn animals or birds.	R 0	40	R 0	R20	R11	R16
85546	Importance of newborn animal receiving colostrum (first milk).	R 0	R20	R 0	R20	R 0	R 0
85547	How to induce the nursing procedure in young animals.	R 0	R20	R 0	R20	R 0	R 0
85548	The importance of following directions in administering treatments.	R 0	60	R 0	40	R11	R16
85549	The importance of sanitation in the use of syringes.	R 0	80	R 0	60	R11	R16
85550	The precautions to take in administering injections & medicines.	R 0	80	R 0	40	R11	R16
85551	Reasons for removing needle teeth from pigs.	R 0	R 0	R 0	R 0	R 0	R 0
85552	The equipment to use, the proper age, & the proper procedure for removing needle teeth.	R 0	R 0	R 0	R 0	R 0	R 0
85553	How to catch sheep for shearing.	R 0	R 0	R 0	R 0	R 0	R 0
85554	How to hold sheep.	R 0	R20	R 0	R 0	R 0	R 0
85555	How to adjust shearing equipment.	R 0	R 0	R 0	R20	R 0	R 0
85556	How to pick up & tie wool properly.	R 0	R 0	R 0	R20	R 0	R 0

Table S-12.--Continued.

Code Number	Job Knowledges	Selected Industries[a]						R=Review[b]
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources	
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)	
85557	How to properly oil, clean, & service small equipment used in raising livestock.	R 0	R20	R 0	R20	R 0	R 0	
85558	How to repair sheep shears, electric clippers, & other equipment.	R 0	R 0	R 0	R 0	R 0	R 0	
85559	Importance of maintaining sanitary conditions for animals & birds.	R 0	60	R10	R20	R11	R16	
85560	The use of disinfectants in maintaining sanitary conditions.	R 0	60	R10	R20	R11	R16	
85561	The effective use of pressure points in restraining animals.	R 0	R20	R10	40	R 0	R 0	
85562	Regulations regarding medicated feed & drug withdrawal periods.	R 0	R20	R10	40	R 0	R 0	
85563	The effects of prior treatment on stress of animals during shipment.	R 0	R20	R10	R 0	R 0	R 0	
85564	The effect of prior treatment on sale price of animals.	R 0	R20	R10	R 0	R 0	R 0	
85565	The techniques used in providing for minimum stress of animals during shipment.	R 0	R20	R10	R20	R 0	R 0	
85566	Accepted showring or sale appearance for the species, breed, & age of animal or bird being groomed.	R 0	R 0	R 0	R 0	R 0	R 0	
85567	Methods of grooming animals or birds for show or sale.	R 0	R 0	R 0	R 0	R 0	R 0	
85568	The use of grooming equipment.	R 0	R20	R 0	R 0	R11	R16	
85569	Basic reproductive physiology of the female animal.	R 0	40	R 0	R 0	R11	R16	
85570	The care & handling of fresh & frozen semen.	R 0	R 0	R 0	R20	R 0	R 0	
85571	The use of equipment for artificial insemination.	R 0	R 0	R 0	R20	R 0	R 0	
85572	The characteristics of the fleece of wool which determines its grade.	R 0	R 0	R 0	R 0	R 0	R 0	
85573	The reasons for grading wool.	R 0	R 0	R 0	R 0	R 0	R 0	
85574	Grades of wool.	R 0	R 0	R 0	R 0	R 0	R 0	
85575	The accepted procedure for grading wool.	R 0	R 0	R 0	R 0	R 0	R 0	
85576	How to recognize the presence of internal parasites in animals & birds.	R 0	R 0	R 0	R20	R 0	R 0	
85577	How to collect a fecal sample & preserve for later examination.	R 0	40	R 0	R 0	R11	R16	
85578	The correct use of materials in the control of internal parasites in animals & birds.	R 0	40	R 0	R20	R11	R16	
85579	The life-cycle of internal parasites of animals & birds.	R 0	60	R 0	R 0	R11	R16	
85580	Correct procedure for administering materials for the control of internal parasites of animals & birds.	R 0	R 0	R 0	40	R 0	R 0	
85581	How to recognize & identify the presence of external parasites of animals & birds.	R 0	R20	R 0	40	R11	R16	

85582	The importance of the correct use of materials for control of external parasites of animals & birds.	R 0	40	R 0	40	R11	R16	
85583	The structure of the cow's udder.	R 0	R20	R 0	R20	R 0	R 0	
85584	The damage that will result to a cow's udder when a milking machine is attached improperly.	R 0	R 0	R 0	R20	R 0	R 0	
85585	The operation of milking machines.	R 0	R20	R 0	R20	R 0	R 0	
85586	How to attach a milking machine properly.	R 0	R 0	R 0	R20	R 0	R 0	
85587	The importance & operations for proper cooling & storage of milk.	R 0	R 0	R 0	R20	R 0	R 0	
85588	The basic bacteriology affecting milk cooling & storage.	R 0	R20	R 0	R 0	R 0	R 0	
85589	The importance of sanitizing milk handling & storage equipment.	R 0	R20	R 0	R20	R 0	R 0	
85590	How to recognize abnormal appearance or behavior of animal & relate to health of animal.	R 0	R20	R 0	R20	R11	R16	
85591	How to take temperature of an animal.	R 0	40	R 0	R20	R11	R16	
85592	Basic nutrition of animals & birds.	R 0	40	R 0	R20	R11	R16	
85593	The nutritive requirements & eating habits of animals.	R 0	40	R 0	R20	R11	R16	
85594	The procedures for carrying out a sanitation program.	R 0	60	R 0	R20	R11	R16	
85595	Humane procedures in sacrificing laboratory animals.	R 0	R20	R 0	R20	R11	R16	
85596	The importance of sterile conditions in preparing animals for surgery.	R 0	80	R 0	R20	R11	R16	
85597	Procedures to follow when preparing animals for surgery.	R 0	60	R 0	R20	R11	R16	
85598	The reaction of the public to clean & sanitary conditions for animals & birds.	R 0	40	R 0	R 0	R 0	R 0	
85599	The breeding habits of the animal & bird.	R 0	R 0	R 0	R20	R 0	R 0	
85600	The basic procedures to be following in collecting semen.	R 0	R 0	R 0	R20	R 0	R 0	
85601	The characteristics of the semen from the animal concerned.	R 0	R 0	R 0	R20	R 0	R 0	
85602	The need for temperature control, sanitation, & freedom from contamination when preparing semen for preservation.	R 0	R20	R 0	R20	R 0	R 0	
85603	Freezing & storage conditions needed for preservation of semen.	R 0	R20	R 0	R20	R 0	R 0	
85604	Conditions needed for successful shipment of semen.	R 0	R 0	R 0	R20	R 0	R 0	
85605	The need for & the procedures to be followed in maintaining sanitary conditions while inseminating animals.	R 0	R 0	R 0	R20	R 0	R 0	
85606	The nutrient requirements of animals to be used for the production of high quality semen.	R 0	R 0	R 0	R20	R 0	R 0	
85607	The physical needs (exercise, temperature, & housing) for animals used in the production of semen.	R 0	R 0	R 0	R20	R 0	R 0	
85608	The production records of animals from which semen is offered.	R 0	R20	R 0	R20	R 0	R 0	
85609	The cross-breeding program to be followed for best results.	R 0	R20	R 0	R20	R 0	R 0	
85610	The appearance of animals infected with internal & external parasites.	R 0	R20	R 0	R20	R11	R16	
85611	The importance of sanitary conditions at stockyards & in trucks.	R 0	R20	R 0	R20	R 0	R 0	

Table S-12.--Continued.

Code Number	Job Knowledges	Selected Industries[a] R=Review[b]					
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)
85612	The laws & regulations governing sanitation at stockyards & in trucks.	R 0	R 0	R 0	R 0	R 0	R 0
85613	Procedures for cleaning & disinfecting stockyards & livestock trucks.	R 0	R20	R 0	R20	R 0	R 0
85614	The habits of the kind of animals or birds being confined.	R 0	40	R 0	R20	R11	R16
85615	The various symptoms of diseases of animals that may render them unfit for human food.	R20	R 0	R10	40	R 0	R 0
85616	The appearance of animals which may have been injuried or over heated in transit.	R 0	R 0	R 0	R20	R 0	R 0
85617	Basic physiology sufficient to locate parts of animals that serve as possible indicators of diseased conditions.	R 0	R20	R 0	R20	R11	R16
85618	The differences in appearance of normal, healthy organs of an animal & those indicating disease.	R 0	R20	R 0	R20	R11	R16
85619	The importance of maintaining sanitary conditions at slaughter houses & meat processing plants.	R 0	R20	R10	R20	R 0	R 0
85620	The laws & regulations governing sanitation at slaughter houses & meat processing plants.	R 0	R 0	R10	R20	R 0	R 0
85621	The areas & equipment to be checked most often & thoroughly for improper sanitation.	R 0	R 0	R10	R20	R 0	R 0
85622	The laws & regulations regarding the handling of milk & milk products.	R 0	R20	R 0	R20	R 0	R 0
85623	The importance of sanitary conditions in the production & processing of milk.	R 0	R 0	R10	R20	R11	R 0
85624	Procedures for making a test for Brucellosis.	R 0	R 0	R 0	R20	R 0	R 0
85625	Procedures for reading & recording results of test for Brucellosis.	R 0	R 0	R 0	R20	R 0	R 0
85626	Importance of pure cultures.	R 0	R 0	R 0	R20	R 0	R 0
85627	Procedures for growing pure cultures.	R 0	R 0	R 0	R20	R 0	R 0
85628	Basic chemical & physical reactions in the manufacturing of milk products.	R 0	R 0	R 0	R20	R 0	R 0
85629	The standards that milk products must meet.	R 0	R20	R10	R20	R11	R 0
85630	The procedures to be followed in the manufacturing of milk products.	R 0	R 0	R10	R20	R11	R 0
85631	Importance of milk pasturization.	R 0	R20	R10	R20	R11	R 0
85632	The importance to the producer & processor of an accurate butterfat test.	R 0	R 0	R10	R20	R11	R 0

85633	The procedure for making & reading a butterfat test.	R 0	R 0	R10	R20	R11	R 0
85634	Procedure for testing milk for solids not fat.	R 0	R 0	R10	R20	R11	R 0
85635	Procedures for making tests of milk products for acidity.	R 0	R 0	R10	R20	R11	R 0
85636	Procedures for calculating dairy production records.	R 0	R 0	R 0	R20	R 0	R 0
85637	Milking arrangements & milking equipment which results in the efficient handling of dairy cows & production of high quality milk.	R 0	R 0	R 0	R20	R 0	R 0
85638	How to check for mastitis.	R 0	R 0	R 0	R20	R 0	R 0
85639	How to check milking procedures to reduce udder problems.	R 0	R 0	R 0	R20	R 0	R 0
85640	Optimum conditions necessary for proper incubation of eggs.	R 0	R 0	R 0	R20	R 0	R 0
85641	The different requirements for incubation of eggs for various species of fowl.	R 0	R 0	R 0	R20	R 0	R 0
85642	Importance of blood test of birds.	R 0	R 0	R 0	R20	R 0	R 0
85643	The condition under which desirable pelts are produced.	R 0	R 0	R 0	R20	R 0	R 0
85644	Pelting procedures.	R 0	R 0	R 0	R20	R 0	R 0
85645	The care & treatment of pelt after removing from animal.	R 0	R 0	R 0	R20	R 0	R 0
85646	The structure of the beak of the bird.	R 0	R 0	R 0	R 0	R 0	R 0
85647	The use of equipment & procedure for de-beaking.	R 0	R 0	R 0	R20	R 0	R 0
85648	The purpose of "dubbing chicks".	R 0	R 0	R 0	R 0	R 0	R 0
85649	The characteristics of eggs which determine grade.	R 0	R 0	R 0	R20	R 0	R 0
85650	Changes in eggs that are fertile.	R 0	R 0	R 0	R20	R 0	R 0
85651	The structure of carcasses.	R 0	R 0	R10	R20	R 0	R 0
85652	The function of the various muscle areas & the relation to tenderness & use of wholesale cuts.	R 0	R 0	R10	R20	R 0	R 0
85653	The distinguishing characteristics of meats from different species of meat animals.	R 0	R 0	R10	R20	R 0	R 0
85654	The distinguishing characteristics between meat from skeletal muscles & meat from edible organs.	R 0	R 0	R 0	R20	R 0	R 0
85655	Procedure for performing & interpreting tests for moisture in meat & meat products.	R 0	R 0	R 0	R20	R 0	R 0
85656	The function of ingredients added to processed meats.	R 0	R 0	R 0	R 0	R 0	R 0
85657	The laws & regulations governing processed meats.	R 0	R 0	R 0	R20	R 0	R 0
85658	The methods used to cure meat & meat products.	R 0	R 0	R 0	R20	R 0	R 0
85659	The use of materials added to meat for curing.	R 0	R 0	R 0	R20	R 0	R 0
85660	The basic anatomy of the poultry carcass.	R 0	R 0	R 0	R20	R 0	R 0
85661	Techniques for testing water for chemical & organic contamination.	R 0	R20	R10	R20	44	33
85662	The sources of contamination in water supplies.	R20	R20	R20	R20	55	50
85663	The characteristics of water needed for processing fruits & vegetables.	R 0	R 0	R10	R20	R11	R16
85664	Procedures which are followed for testing water for mineral content.	R 0	R20	R10	R20	33	33

61

B

Table S-12.--Continued.

Code Number	Job Knowledges	Selected Industries[a]						R=Review[b]
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources	
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)	
85665	Chemical & bacteriological procedures for testing water for contamination.	R 0	R20	R10	R20	44	33	
85666	Laboratory procedures for cleaning & sterilizing glassware & other utensils.	R 0	R20	R 0	R20	R22	R16	
85667	Effect of phosphates in run-off water on the plant & animal life in lakes & streams.	R20	R20	R10	R 0	44	50	
85668	How water travels through the soil & the effect of continuous saturation of the soil.	R20	R20	R10	R 0	66	66	
85669	The principles underlying water disposal systems designed to avoid contamination & having adequate percolation.	R20	R20	R10	R20	66	66	
85670	The effect of water additives on the plant parts being washed.	R 0	R20	R10	R20	R22	33	
85671	Distinguishing characteristics of grades of forage.	R20	R 0	R 0	40	R11	R16	
85672	Tests which will indicate chemical contamination of forage.	R 0	R 0	R 0	R20	R 0	R 0	
85673	Identification characteristics of forages.	R20	R 0	R 0	40	R11	R16	
85674	Use of tables to determine nutritive value of forages.	R20	R 0	R 0	40	R11	R16	
85675	Tests which will indicate protein & engery values of forages.	R 0	R 0	R 0	40	R 0	R 0	
85676	Techniques to follow to determine moisture content of forages.	R20	R 0	R 0	40	R11	R16	
85677	Importance of accuracy in sampling experimental plants or forage crops.	R20	R 0	R 0	40	R11	R16	
85678	The significance of the seed analysis label when purchasing and/or selling seeds for forage crops.	R20	R 0	R10	60	R 0	R 0	
85679	The role of nitrogen fixing bacteria in legume crops.	R20	R 0	R 0	R20	R11	R16	
85680	The kind of inoculants appropriate for legumes.	R20	R 0	R10	40	R 0	R 0	
85681	The significance of molds in forages to be used for livestock feed.	R 0	R 0	R 0	40	R 0	R 0	
85682	The possible effects of herbicide residues on succeeding crops in terms of yield and/or contamination.	60	R 0	R20	60	R22	33	
85683	The seeding modifications to be made as a result of specified germination tests.	R20	R 0	R 0	R20	R11	R16	
85684	Purpose of field inspection in terms of purity of seed & freedom from disease.	R20	R 0	R 0	40	R11	R16	
85685	The characteristics of insect damage of vegetable & potato crops.	40	R 0	R20	R20	R22	33	
85686	The conditions likely to result in an outbreak of insect and/or diseases of potatoes or vegetables.	40	R 0	R20	R20	R22	33	

85687	The characteristics of potatoes and/or vegetables representing optimum conditions for harvest.	R20	R 0	R20	R20	R11	R16
85688	The identifying characteristics determing grade of vegetables and/or potatoes.	R 0	R 0	R10	R20	R 0	R 0
85689	The optimum storage condition for each kind of vegetable & potato commonly grown in the area.	R 0	R 0	R20	R20	R 0	R 0
85690	The characteristics of vegetables & potatoes for specified purposes (as drying, freezing, canning, baking, etc.).	R 0	R 0	R10	R20	R 0	R 0
85691	Disease tolerances of various varieties of vegetables & potatoes.	40	R 0	R20	R20	R22	33
85692	The identifying characteristics of vegetable plants commonly grown in the area.	40	R 0	R20	R20	R22	33
85693	The significance of seed analysis when purchasing and/or selling vegetable seeds.	R 0	R 0	R10	R20	R 0	R 0
85694	The importance of growing vegetables & potatoes free of varietal mixtures & diseases.	40	R 0	R10	R20	R22	33
85695	Characteristic damage caused by various types of insects affecting fruits common to the area.	40	R 0	R10	R20	R22	33
85696	Methods for determining potential build-up of harmful insects.	40	R 0	R10	R20	R22	33
85697	The economic & legal aspects of program to remove diseased fruit trees & bushes.	40	R 0	R10	R20	R22	33
85698	Tests commonly used to determine sugar and/or acidity content of fruits.	R 0	R 0	R10	R20	R 0	R 0
85699	Tests to be used to determine presence of undesirable (or illegal) chemical residues.	R 0	R 0	R10	R20	R 0	R 0
85700	The characteristics of each specific kind of fruit which determines market grade.	R 0	R 0	R10	R20	R 0	R 0
85701	The effect of diseases, insects, & mechanical injury on fruit in terms of the market channels it will enter.	40	R 0	R20	R20	R22	33
85702	The fermentation process in wine making.	R 0	R 0	R10	R 0	R 0	R 0
85703	The factors affecting the flavor of fruit juices.	R 0	R 0	R10	R20	R 0	R 0
85704	The fermentation process.	R 0	R 0	R10	R20	R 0	R 0
85705	The importance of accuracy in checking experimental results.	R20	R 0	R10	R20	R11	R16
85706	Methods of running laboratory tests for the protein content of grain & beans.	R 0	R 0	R 0	40	R 0	R 0
85707	Methods of running laboratory tests to determine fat content of grain & beans.	R 0	R 0	R 0	40	R 0	R 0
85708	Methods of running laboratory tests for determining moisture content of grain & beans.	R20	R 0	R 0	40	R11	R16
85709	The approved methods for making germination tests of seeds.	R 0	R 0	R 0	R20	R 0	R 0
85710	How to interpret results of germination tests.	R20	R 0	R 0	R20	RTT	R16
85711	Principles of cross-pollination.	R20	R 0	R 0	R20	R11	R16
85712	Process & procedure in producing hybrid seed corn.	R20	R 0	R 0	R20	R11	R16
85713	Methods commonly used for drying grains & beans.	R20	R 0	R 0	R20	R11	R16

Table S-12.--Continued.

Code Number	Job Knowledges	Selected Industries[a]						R=Review[b]
		Agricultural Chemical	Animal Laboratory	Food Processing	Grain/Feed/ Seed Services	Waste Disposal	Water Resources	
		% (N=5)	% (N=5)	% (N=10)	% (N=5)	% (N=9)	% (N=6)	
85714	Recommendations for treating seed grains & beans for control of diseases common to the grain and/or beans grown in the area.	40	R 0	R10	40	R22	33	
85715	The characteristics of damage caused by diseases in grains and/or beans commonly grown in the area.	40	R 0	R10	40	R22	33	
85716	Control measures recommended for diseases of grains or beans commonly grown in the area.	40	R 0	R10	40	R22	33	
85717	Control measures recommended for insects affecting grain or beans commonly grown in the area.	40	R 0	R10	40	R22	33	
85718	Changes taking place after harvest of sweet corn & other vegetables.	40	R 0	R10	R20	R22	33	
85719	Precautions to avoid contamination of food and/or seed & to avoid pollution of the environment (air, water, etc.) when grains or beans are being treated for diseases or insects.	60	R 0	R20	40	R22	33	
85720	Methods of determining optimum time to harvest sweet corn.	R20	R 0	R 0	R20	R11	R16	
85721	Methods of determining optimum time to harvest popcorn.	R20	R 0	R 0	R20	R11	R16	
85722	The principles & methods to be followed in determining grades of grains or beans.	R 0	R 0	R 0	40	R 0	R 0	
85723	Standard USDA procedures of collecting samples of market grain or beans in bins, railroad cars, or bags.	R20	R 0	R 0	R20	R11	R16	
85724	Standard USDA procedures for collecting samples of seed grain or beans for analysis.	R20	R 0	R 0	R20	R11	R16	
85725	Appropriate market uses for various market grades of grain or beans.	R 0	R 0	R 0	R20	R 0	R 0	
85726	The program of certified seed production.	R 0	R 0	R 0	R20	R 0	R 0	
85727	The conditions needed for the successful establishing of a lawn.	R20	R 0	R10	R20	R22	33	
85728	The characteristics of lawn grass needed for various conditions.	R 0	R 0	R 0	R20	R11	R16	
85729	The growth characteristics of lawn grasses which determine mowing conditions.	R 0	R 0	R 0	R20	R11	R16	
85730	Recommendations of the soil conservation service and/or the cooperative extension service for taking soil samples.	40	R 0	R10	R20	33	50	
85731	The characteristics of soil types which are used for identification.	40	R 0	R10	R20	33	50	
85732	The techniques & materials used for testing soils for pH, NPK, minor elements, & organic matter.	40	R 0	R10	R20	R22	33	
85733	The use of cooperative extension materials for determining amount of material to use for modifying pH of soils to specified levels.	40	R 0	R10	R20	R22	33	
85734	The technique for use of soil moisture testers.	40	R 0	R10	R20	R22	33	

85735	Kinds of practices recommended for specific kinds of erosion (windbreaks, waterways, contouring, etc.).	40	R 0	R10	R20	33	50
85736	The characteristics of each soil capability class found in the area.	R20	R 0	R 0	R20	R22	33
85737	The type or kind of crops which are best adapted to the soil capability classes.	R20	R 0	R 0	R20	R22	33
85738	The need for accuracy in laying out & checking results of experimental plots.	R20	R 0	R 0	R20	R11	R16
85739	The plant food & moisture requirements for a healthy lawn.	R20	R 0	R 0	R20	R22	33
85740	The principles of weed control by cultivation, cultural practices, & chemicals.	40	R 0	R10	R20	33	50
85741	Precautions to be observed when using chemicals for weed control.	60	R 0	R20	40	R22	33
85742	Designation of lights for growing plants in terms of color, brilliance, & exposure time.	R 0	R 0	R 0	R20	R 0	R 0
85743	The principles underlying a hydrophonic system.	R 0	R 0	R 0	R20	R 0	R 0
85744	The effect of lights on plant growth.	R 0	R 0	R 0	R20	R 0	R 0
85745	The effect of temperature on plant growth.	R20	R 0	R 0	R20	R11	R16
85746	The effects of hormones on types of plant growth (Gibberelic acid, etc.).	R20	R 0	R10	R20	R11	R16
85747	Climatic adaptations of various kinds of plants (desert; water; humidity, etc.).	R20	R 0	R 0	R20	R11	R16
85748	Methods of sterilizing soil.	R 0	R 0	R 0	R20	R 0	R 0
85749	The normal time from planting to harvest of various kinds of crops.	R20	R 0	R 0	40	R11	R16
85750	The practices that may cause variations in the time schedule of plants from planting to harvest.	R20	R 0	R 0	R20	R11	R16
85751	The use of sanitation, chemicals, & other means of controlling diseases & insects on greenhouse plants.	R 0	R 0	R 0	R20	R 0	R 0
85752	The direction for use of chemicals for control of diseases & insects.	60	R 0	R20	40	R22	33
85753	The significance of tissue tests of plants.	R20	R 0	R 0	R20	R11	R16
85754	Plant physiology in relation to foliar feeding.	R20	R 0	R 0	R 0	R11	R16
85755	Physiology of plants in relation to feeding through the roots.	R20	R 0	R 0	R 0	R11	R16
85756	The need for strict adherance to directions when doing experimental work.	R20	R 0	R10	R 0	R22	R16

[a]The 40 responses for the six selected industries in the biological-technical services in agriculture were reported from only 23 individuals; i.e., the mean number of industries per respondent was 1.7.

[b]If 33 percent or more of the respondents indicated a knowledge was "essential" for job entry, the job knowledge was accepted; if less than 33 percent, the knowledge was reviewed. When the job skill associated with the reviewed knowledge was accepted the associated knowledge marked "review" was also accepted. However, if the job skill associated with the reviewed knowledge was rejected, the associated knowledge was also rejected.

SERIES C

A MATRIX OF UNVALIDATED JOB SKILLS AND THEIR
ASSOCIATED JOB KNOWLEDGES

Table S-13.--A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Agricultural Production.

Job Skill Code Number	Job Knowledge Code Numbers
85001	85501 85502
85002	85501 85503 85504
85003	85505
85004	85504
85005	85505 85506 85507
85006	85506
85007	85508 85509 85510
85008	85511 85512 85513 85514 85515
85009	85513
85010	85516 85517
85011	85518
85012	85519 85520 85521
85013	85522 85523
85014	85524 85525 85526
85015	85528 85529 85530 85647
85016	85531
85017	85532 85533 85534 85535
85018	85527 85536
85019	85537 85538
85020	85539 85540 85541 85542
85021	85543 85540 85541
85022	85542
85023	85543
85024	85544 85545
85025	85546 85547
85026	85548 85549 85550 85551
85027	85552 85553 85554 85555 85556
85028	85557
85029	85556 85566
85030	85558 85559
85031	85559
85032	85560 85561
85033	85560 85561
85034	85562
85035	85563
85036	85564 85565 85566 85567
85037	85568
85038	85569 85570
85039	85569 85570
85040	85571
85041	85571
85042	85571
85043	85572 85576
85044	85573
85045	85574 85575
85046	85576
85047	85576 85578 85577
85048	85578 85579 85580
85049	85581 85582 85583
85050	85584 85585 85586
85051	85587
85052	85588
85053	85589
85054	85589
85055	85589
85056	85590
85057	
85058	85591 85592
85059	85592
85060	85593 85594
85061	85595 85596
85062	85599
85063	85597 85598 85600
85064	85601
85065	85601
85066	85602 85604

85067	85605 85608 85607
85068	85603 85606
85069	85609 85608
85070	85610 85611 85612 85603
85071	
85072	
85073	85614
85074	85615
85075	85613
85076	85616
85077	85616 85617
85078	85617
85079	85618
85080	
85081	85620
85082	85620
85083	85620 85621
85084	85622
85085	85623
85086	85624
85087	85625
85088	85626
85089	85627 85628
85090	85629

85091	85630
85092	85631
85093	85632
85094	85632 85633
85095	85634
85096	85635 85636
85097	85637
85098	85638
85099	85639
85100	85639
85101	85639
85102	85640 85641
85103	85642
85104	85643 85644
85105	85644
85106	85645 85646
85107	85646
85108	85646
85109	
85110	85647
85111	85647
85112	85648
85113	85649
85114	85650 85651

85115	85652
85116	85653
85117	85654
85118	85655
85119	85656
85120	85657
85121	85658

Table S-14.--A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Environmental Horticulture.

Job Skill Code Number	Job Knowledge Code Numbers
85001	85501 85502 85503
85002	85502 85503 85504 85505
85003	85503 85504 85505 85506
85004	85503
85005	85502 85503
85006	85503
85007	85504
85008	85504 85503
85009	85504
85010	85507 85508
85011	85508
85012	85508 85509 85510
85013	85509
85014	85510 85511
85015	85512
85016	85513
85017	85514
85018	85514
85019	85532 85514 85531
85020	85516 85531 85532
85021	85517 85518 85519
85022	85517 85518 85519 85520
85023	85517 85518 85519 85520
85024	85517 85518 85519 85520
85025	85515 85521 85522
85026	85521 85522 85523
85027	85524
85028	85524 85525 85526
85029	85524 85525 85526
85030	85528
85031	85527
85032	85529
85033	85528 85530 85527 85534
85034	85531 85532 85533
85035	
85036	85535
85037	85536
85038	85537
85039	85538 85539
85040	85540 85541
85041	85540 85541
85042	85540 85541
85043	85542 85543 85545
85044	85544
85045	85543 85546
85046	85546
85047	85547
85048	85548
85049	85548
85050	85550
85051	85551 85552
85052	85553
85053	85554
85054	85555
85055	85555
85056	85556 85557
85057	85555
85058	85558
85059	85559
85060	85560
85061	85560 85561
85062	85561
85063	85562 85563 85572
85064	85563
85065	85563
85066	85564
85067	85565
85068	85566
85069	85567 85568
85070	85569
85071	85570

85072	85571
85073	85572
85074	85573
85075	85574
85076	85575
85077	85576
85078	85577
85079	85578
85080	
85081	85519 85520
85082	85519 85520
85083	85579 85581 85584
85084	85583
85085	85583
85086	85580 85582
85087	85580
85088	85584 85579 85581
85089	85584 85579
85090	85579
85091	85579
85092	85579
85093	85585
85094	85586 85587 85588
85095	85587 85588
85096	85589
85097	85586 85587 85588 85589 85590
85098	85590 85587
85099	85586 85587 85588
85100	85591 85592 85593
85101	85591
85102	85592 85593 85594
85103	85592
85104	85593
85105	85594
85106	85595 85601
85107	85596 85601
85108	85597
85109	85598 85599 85601
85110	85600
85111	85601

Table S-15.--A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Farm Implement Repair.

Job Skill Code Number	Job Knowledge Code Numbers
85001	85501 85502
85002	85501 85502 85503
85003	85502 85626 85627
85004	85502 85504
85005	85505
85006	85506
85007	85506
85008	85507
85009	85508 85509 85510
85010	85510
85011	85511
85012	85512
85013	85513
85014	85514
85015	85515
85016	85516 85517
85017	85511
85018	85516 85517
85019	85516
85020	85518 85519
85021	85515 85517 85512
85022	85512
85023	85516
85024	85524
85025	85524 85525 85526
85026	85526 85523 85521
85027	85519 85520
85028	85522
85029	85523 85526
85030	85523 85526
85031	85524 85526
85032	85526
85033	85526
85034	
85035	85526
85036	85526
85037	85526
85038	
85039	
85040	85525
85041	85524 85526
85042	
85043	85523
85044	85514
85045	85515
85046	85515
85047	85571 85572
85048	85539 85543 85570
85049	85546 85570
85050	85527 85529 85534
85051	85530 85532
85052	85531 85535 85538
85053	85527
85054	85530 85533
85055	85528
85056	85527 85532
85057	85532 85533 85537
85058	85543 85549 85559 85566 85567 85568 85569
85059	85540 85541 85542 85543 85544
85060	85545 85561
85061	85534
85062	85538 85541 85547
85063	85540
85064	85565 85536
85065	85544 85550 85552
85066	85542 85550
85067	85563
85068	85551 85560 85562
85069	85548 85553

85070	
85071	85550 85563
85072	85564
85073	85548 85546
85074	85546 85557
85075	
85076	85546 85557 85564
85077	85548
85078	85548
85079	85553
85080	85553
85081	85564 85565
85082	85563
85083	85544
85084	
85085	85550 85563
85086	85547
85087	85546
85088	85546
85089	
85090	
85091	85565
85092	

85093	
85094	
85095	85544
85096	85554
85097	85554
85098	85556
85099	85556 85558
85100	
85101	85555
85102	
85103	
85104	
85105	85546
85106	85546
85107	
85108	
85109	85548
85110	85557
85111	85559
85112	85558
85113	
85114	85546 85563
85115	85546
85116	
85117	
85118	85565

85119	
85120	
85121	85566
85122	85549
85123	
85124	85574 85575
85125	
85126	85573 85581 85578
85127	85573
85128	85574 85579
85129	85574 85577
85130	
85131	85574 85577
85132	85576
85133	
85134	85574 85580
85135	
85136	
85137	
85138	85587
85139	85587
85140	85584 85589
85141	85588

85142	85588
85143	85583
85144	85583
85145	85590
85146	85582
85147	85583
85148	85595 85590
85149	85585
85150	85594 85593 85592 85591
85151	85596 85597 85599 85600 85601
85152	85596
85153	85599 85504
85154	85596
85155	85597
85156	85598
85157	
85158	85602 85603
85159	85604
85160	85605
85161	85606 85599
85162	85605

73

C

Table S-15.--Continued.

Job Skill Code Number	Job Knowledge Code Numbers
85163	85606
85164	85607 85608 85585
85165	
85166	85539
85167	85613 85582
85168	85506 85629 85628
85169	85621 85505
85170	85621
85171	85608 85619 85609 85610
85172	85608 85611
85173	85584 85586
85174	85592 85590 85613 85621
85175	85586 85613 85621
85176	85621 85625 85594
85177	
85178	85614 85615 85620 85592 85589
85179	85595
85180	85595 85590
85181	85608 85609 85010
85182	85592 85624
85183	85614
85184	85621 85623
85185	85617 85618
85186	85622
85187	85616
85188	85620 85621
85189	
85190	85616 85618
85191	85623
85192	85616
85193	85608
85194	85624
85195	85616 85621
85196	85616 85617
85197	85626 85627
85198	
85199	85505
85200	
85201	85621
85202	85506
85203	85506
85204	
85205	85608
85206	85630 85631
85207	85631
85208	85636
85209	85632
85210	85633
85211	85632 85633
85212	85634
85213	85634
85214	85636
85215	85638
85216	85638
85217	85638
85218	85638
85219	85638
85220	85639 85642 85643
85221	85640
85222	85641 85644 85645 85646
85223	85647 85648
85224	85649
85225	
85226	
85227	
85228	85603 85602
85229	85603 85602
85230	85601
85231	85601
85232	85650
85233	85651
85234	85652
85235	85653
85236	85653
85237	85654 85655

85238	85656
85239	85657 85660
85240	85658
85241	85659
85242	85661 85662
85243	85662
85244	85663
85245	85664
85246	85665
85247	85664

Table S-16.--A Matrix of Unvalidated Job Skills and Their Associated Job Knowledges for Biological-Technical Services in Agriculture.

Job Skill Code Number	Job Knowledge Code Numbers
85001	85501 85502
85002	85503 85504
85003	85508 85509 85510
85004	85505 85511 85512
85005	85513 85514 85515
85006	85516 85517
85007	85518 85519
85008	85520 85521 85522
85009	85523 85506 85507 85524
85010	85525
85011	85526 85527 85528
85012	85529 85530 85531 85532
85013	85533 85534 85535
85014	85536 85537 85538
85015	85539 85540
85016	85539 85540 85541 85542 85543 85544
85017	85544 85545 85546
85018	85546 85547
85019	85548 85549 85550
85020	85551 85552
85021	85553 85554 85555 85556
85022	85555 85557 85558
85023	85559 85560
85024	85561
85025	85562 85563 85564 85565
85026	85566 85567 85568
85027	85569 85570 85571
85028	85072 85073 85074 85075
85029	85576 85577 85578 85579 85580
85030	85581 85582
85031	85583 85584 85585 85586
85032	85587 85588 85589
85033	85587 85588 85589
85034	85594 85590 85591
85035	85592 85593
85036	85592 85593
85037	85592 85593
85038	85595 85596 85597 85598
85039	85599 85598 85593
85040	85596 85597
85041	85596 85597
85042	85600 85601
85043	85602 85603 85604
85044	85604 85605
85045	85606 85607 85608
85046	85608 85609
85047	85610 85611 85612 85613
85048	85614
85049	85611 85614
85050	85615 85616
85051	85617 85618

85052	85619 85620 85621
85053	85622 85623
85054	85624 85625
85055	85626 85627 85630
85056	85626 85627 85630 85628
85057	85629 85630 85631
85058	85623 85621
85059	85632 85633
85060	85634
85061	85635
85062	85636
85063	85637
85064	85638 85639
85065	85640 85641
85066	85642
85067	85642
85068	85643 85644 85645
85069	85644 85645

85070	85646 85647
85071	85648
85072	85649
85073	85650
85074	85651 85652
85075	85653 85654
85076	85655
85077	
85078	85656
85079	85657 85658 85659
85080	85660
85081	85661 85662
85082	85663 85670 85664
85083	85665 85666
85084	85664
85085	85665 85669
85086	85666
85087	85667 85668
85088	85669
85089	85661
85090	85671

85091	85672
85092	85673
85093	85674 85675 85676
85094	85681
85095	85676 85677
85096	85677
85097	85677
85098	85676
85099	85677
85100	85678
85101	85678
85102	85679 85680
85103	85682
85104	85683
85105	85684
85106	85685
85107	85686
85108	85684
85109	85685
85110	85687
85111	85688
85112	85689
85113	85690
85114	85691 85692

85115	85693 85694
85116	85694 85695 85696
85117	85692
85118	85696
85119	85696
85120	85701
85121	85697
85122	85698
85123	85700
85124	85700
85125	85701
85126	85699
85127	
85128	85701
85129	85700
85130	85702 85703
85131	85702 85703 85704
85132	85705
85133	85706
85134	85707
85135	85707
85136	85708
85137	85709 85710

Table S-16.--Continued.

Job Skill Code Number	Job Knowledge Code Numbers
85138	85715
85139	85711 85712
85140	85713
85141	85714
85142	85715
85143	85717 85715
85144	85716 85715
85145	85716 85717 85719
85146	85716 85717 85719
85147	85718 85720
85148	85721
85149	85722 85723 85724
85150	85722 85723 85724
85151	85722 85723 85724
85152	85722 85723 85724
85153	85722 85723 85724
85154	85725
85155	85726
85156	
85157	85726
85158	85726
85159	85726
85160	85727
85161	85728
85162	85729
85163	85730
85164	85731
85165	85732
85166	85733
85167	85732
85168	85733
85169	85734
85170	85735
85171	85736
85172	85732
85173	85733
85174	
85175	85735
85176	85735
85177	85736 85737
85178	85737
85179	85738
85180	85738
85181	85739
85182	85740 85741
85183	85742
85184	85743
85185	85744
85186	85745
85187	85746
85188	85747
85189	85748
85190	85749 85750
85191	85751
85192	85752
85193	85753
85194	85754
85195	85755
85196	85756

SERIES D

JOB SKILLS ACCEPTED AS ENTRY LEVEL FOR EMPLOYMENT

Table S-17.--Job Skills Accepted as Entry Level for Employment in Dairy Farming.

Job Skill Code No.[a]	N=14 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=14 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=14 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=14 No.	%	Total Weight[b]
85001	10	71	29.4	85032	12	85	30.5	85063	12	85	33.9	85092	10	71	30.1
85002	10	71	28.7	85033	12	85	32.5	85064	9	64	28.0	85093	11	78	34.0
85003	12	85	33.6	85034	11	78	29.7	85065	9	64	28.0	85094	10	71	29.8
85004	10	71	30.5	85035	11	78	31.5	85066	11	78	36.8	85095	10	71	29.4
85005	10	71	34.0	85036	9	64	28.0	85067	9	64	30.1	85096	9	64	28.0
85006	6	42	21.7	85037	7	50	21.7	85068	11	78	37.8	85097	8	57	25.2
85007	8	57	25.9	85038	7	50	19.9	85069	8	57	23.8	85098	12	85	32.9
85008	7	50	25.9	85039	7	50	21.0	85070	11	78	32.2	85099	8	57	25.2
85009	9	64	27.3	85040	9	64	25.2	85071	11	78	33.6	85100	6	42	22.4
85010	10	71	33.6	85041	10	71	27.6	85072	9	64	28.7	85102	11	71	37.1
85011	10	71	30.8	85042	10	71	26.2	85073	9	64	28.7	85103	8	57	28.0
85012	9	64	27.3	85043	11	78	30.1	85074	12	85	32.9	85104	11	78	35.7
85013	11	78	32.2	85044	11	78	30.4	85075	6	42	22.4	85105	12	85	35.4
85014	12	85	33.6	85045	13	92	37.8	85076	9	64	27.3	85106	12	85	32.9
85015	12	85	37.1	85046	12	85	38.5	85077	11	78	37.8	85107	13	92	33.3
85016	12	85	38.2	85047	12	85	36.4	85078	12	85	36.1	85108	11	78	33.6
85017	13	92	40.3	85048	11	78	36.8	85079	12	85	36.1	85109	7	50	25.2
85018	11	78	35.0	85049	12	85	39.6	85080	9	64	28.0	85110	12	85	38.5
85019	13	92	36.1	85050	12	85	33.6	85081	13	92	42.5	85111	12	85	39.2
85020	13	92	34.7	85051	12	85	32.9	85082	12	85	37.8	85112	11	78	29.0
85021	13	92	35.4	85052	12	85	32.9	85083	12	85	37.1	85113	8	57	28.7
85022	10	71	25.5	85053	9	64	25.2	85084	12	85	37.1	85114	12	85	30.4
85023	6	42	21.7	85054	10	71	30.1	85085	11	78	32.6	85115	13	92	37.8
85025	7	50	24.5	85055	10	71	28.7	85086	12	85	35.7	85116	12	85	35.0
85026	7	50	24.5	85056	13	92	39.9	85087	10	71	32.9	85117	10	71	28.7
85027	10	71	28.7	85057	12	85	37.1	85088	10	71	32.9	85118	9	64	28.0
85028	10	71	28.0	85060	9	64	27.3	85089	9	64	32.2	85119	10	71	28.7
85029	12	85	37.8	85061	11	78	31.5	85090	10	71	30.8	85120	13	92	36.8
85030	8	57	25.2	85062	13	92	39.9	85091	13	92	33.6	85121	11	78	31.9
85031	11	78	32.2												

[a] See Table S-5 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ (percentage of responses per category X weighted value of category).

Table S-18.--Job Skills Accepted as Entry Level for Employment in Bush and/or Vine Fruit Farming.

Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]
85001	3	60	34.0	85026	4	80	30.0	85075	4	80	34.0	85100	2	40	22.0
85002	3	60	34.0	85027	2	40	26.0	85076	4	80	32.0	85101	3	60	32.0
85003	3	60	28.0	85028	3	60	28.0	85077	5	100	42.0	85102	5	100	40.0
85004	3	60	32.0	85029	4	80	32.0	85078	5	100	38.0	85103	4	80	34.0
85005	4	80	36.0	85031	3	60	34.0	85079	4	80	38.0	85104	5	100	44.0
85006	5	100	32.0	85032	4	80	32.0	85080	5	100	42.0	85105	5	100	40.0
85007	3	60	28.0	85033	3	60	32.0	80581	5	100	44.0	85106	5	100	46.0
85008	3	60	28.0	85034	4	80	38.0	85082	5	100	42.0	85107	5	100	42.0
85009	3	60	32.0	85035	4	80	34.0	85083	5	100	34.0	85108	5	100	40.0
85010	4	80	38.0	85036	3	60	32.0	85084	5	100	40.0	85109	4	80	34.0
85011	4	80	34.0	85038	2	40	24.0	85085	5	100	38.0	85110	4	80	36.0
85012	4	80	36.0	85041	3	60	26.0	85086	5	100	38.0	85111	5	100	42.0
85013	4	80	38.0	85062	5	100	42.0	85087	5	100	42.0	85112	4	80	30.0
85014	3	60	32.0	85063	4	80	36.0	85088	5	100	40.0	85113	3	60	26.0
85015	5	100	42.0	85064	4	80	36.0	85089	5	100	40.0	85114	4	80	34.0
85016	4	80	32.0	85065	4	80	34.0	85090	5	100	44.0	85115	4	80	38.0
85017	5	100	42.0	85066	5	100	40.0	85091	5	100	42.0	85116	4	80	36.0
85018	5	100	44.0	85067	5	100	40.0	85092	5	100	40.0	85117	3	60	30.0
85019	5	100	42.0	85068	5	100	42.0	85093	5	100	42.0	85118	5	100	34.0
85020	3	60	28.0	85069	2	40	26.0	85094	4	80	36.0	85119	3	60	30.0
85021	4	80	38.0	85070	5	100	40.0	85095	5	100	40.0	85120	3	60	26.0
85022	3	60	24.0	85071	5	100	42.0	85096	4	80	34.0	85121	4	80	32.0
85023	4	80	36.0	85072	5	100	40.0	85097	4	80	34.0				
85024	2	40	26.0	85073	5	100	42.0	85098	4	80	32.0				
85025	5	100	38.0	85074	5	100	42.0	85099	2	40	26.0				

[a] See Table S-5 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per categroy X weighted value of category).

Table S-19.--Job Skills Accepted as Entry Level for Employment in Tree Fruit Farming.

Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]
85001	4	80	34.0	85031	4	80	38.0	85062	5	100	42.0	85092	4	80	38.0
85002	4	80	34.0	85032	4	80	38.0	85063	3	60	38.0	85093	4	80	36.0
85003	4	80	32.0	85033	4	80	38.0	85064	3	60	34.0	85094	3	60	32.0
85004	4	80	36.0	85034	4	80	38.0	85065	3	60	32.0	85095	4	80	36.0
85005	3	60	30.0	85035	4	80	38.0	85066	4	80	38.0	85096	4	80	34.0
85006	2	40	20.0	85036	4	80	36.0	85067	4	80	36.0	85097	4	80	32.0
85007	3	60	24.0	85037	3	60	24.0	85068	5	100	42.0	85098	4	80	34.0
85008	3	60	30.0	85038	4	80	26.0	85069	4	80	32.0	85099	3	60	32.0
85009	3	60	22.0	85039	3	60	24.0	85070	5	100	38.0	85100	3	60	32.0
85010	3	60	30.0	85040	3	60	28.0	85071	4	80	36.0	85101	3	60	36.0
85011	3	60	26.0	85041	3	60	24.0	80572	4	80	40.0	85102	5	100	40.0
85012	3	60	32.0	85042	3	60	24.0	85073	4	80	40.0	85103	4	80	36.0
85013	3	60	34.0	85043	2	40	20.0	85074	4	80	38.0	85104	4	80	40.0
85014	4	80	38.0	85044	2	40	22.0	85075	3	60	26.0	85105	4	80	40.0
85015	4	80	36.0	85045	2	40	22.0	85076	3	60	28.0	85106	4	80	38.0
85016	4	80	40.0	85046	2	40	20.0	85077	4	80	40.0	85107	5	100	40.0
85017	4	80	38.0	85047	2	40	18.0	85078	5	100	42.0	85108	4	80	32.0
85018	4	80	38.0	85048	2	40	18.0	85079	4	80	38.0	85109	4	80	36.0
85019	4	80	38.0	85049	2	40	20.0	85080	4	80	38.0	85110	4	80	40.0
85020	4	80	32.0	85050	2	40	18.0	85081	5	100	44.0	85111	4	80	40.0
85021	4	80	36.0	85051	2	40	18.0	85082	4	80	38.0	85112	4	80	36.0
85022	4	80	30.0	85052	2	40	16.0	85083	4	80	38.0	85113	3	60	32.0
85023	4	80	32.0	85053	2	40	14.0	85084	4	80	38.0	85114	3	60	26.0
85024	4	80	30.0	85054	2	40	14.0	85085	4	80	38.0	85115	4	80	40.0
85025	4	80	34.0	85055	2	40	14.0	85086	4	80	38.0	85116	4	80	36.0
85026	4	80	36.0	85056	2	40	18.0	85087	4	80	38.0	85117	3	60	34.0
85027	3	60	32.0	85057	2	40	16.0	85088	4	80	38.0	85118	4	80	36.0
85028	4	80	34.0	85058	2	40	8.0	85089	4	80	38.0	85119	3	60	30.0
85029	4	80	34.0	85059	2	40	8.0	85090	4	80	38.0	85120	3	60	32.0
85030	3	60	30.0	85061	2	40	14.0	85091	4	80	38.0	85121	3	60	34.0

[a] See Table S-5 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-20.--Job Skills Accepted as Entry Level for Employment in Grain and/or Bean Farming.

Job Skill Code No.[a]	N=30 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=30 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=30 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=30 No.	%	Total Weight[b]
85001	22	73	31.1	85031	24	80	38.7	85064	22	73	30.5	85093	27	90	36.0
85002	23	76	30.4	85032	26	86	31.6	85065	22	73	30.1	85094	25	83	32.7
85003	27	90	36.6	85033	28	93	35.4	85066	25	83	35.2	85095	23	76	32.5
85004	24	80	31.0	85034	26	86	36.4	85067	21	70	31.2	85096	24	80	32.8
85005	24	80	33.7	85035	26	86	36.5	85068	25	83	37.4	85097	22	73	28.7
85006	21	70	27.6	85036	23	76	34.7	85069	16	53	24.0	85098	26	86	33.9
85007	22	70	29.9	85037	20	66	25.6	85070	24	80	33.4	85099	18	60	26.7
85008	20	66	28.8	85039	15	50	22.3	85071	23	76	32.8	85100	15	50	25.1
85009	22	73	30.8	85040	24	80	31.2	85072	20	66	28.9	85101	15	50	26.5
85010	27	90	42.2	85041	23	76	30.3	85073	22	73	32.0	85102	22	73	34.0
85011	26	86	34.3	85042	21	70	27.4	85074	23	76	31.9	85103	18	60	28.4
85012	22	73	31.1	85043	19	63	26.8	85075	18	60	26.9	85104	24	80	34.4
85013	27	90	37.7	85044	19	63	24.6	85076	22	73	29.7	85105	25	83	33.2
85014	27	90	34.5	85045	20	66	29.9	85077	27	90	38.4	85106	27	90	36.5
85015	29	96	38.4	85046	21	70	32.1	85078	26	86	34.9	85107	28	93	37.4
85016	29	96	38.7	85047	22	73	30.7	85079	24	80	33.8	85108	29	96	37.0
85017	28	93	38.0	85048	21	70	29.5	85080	23	76	33.5	85109	23	76	31.1
85018	26	86	36.6	85049	22	73	33.4	85081	27	90	41.9	85110	27	90	37.5
85019	27	90	37.3	85050	22	73	29.8	85082	27	90	38.5	85111	29	96	40.1
85020	27	90	36.4	85051	19	63	29.1	85083	25	83	37.5	85112	23	76	29.6
85021	25	83	35.4	85052	21	70	28.2	85084	26	86	35.2	85113	24	80	30.6
85022	24	80	30.4	85053	17	56	24.6	85085	24	80	31.9	85114	26	86	33.0
85023	14	46	21.7	85054	14	46	21.0	85086	26	86	33.7	85115	28	93	39.4
85024	12	40	21.5	85055	12	40	19.9	85087	26	86	35.0	85116	27	90	37.4
85025	19	63	29.1	85056	14	46	23.8	85088	24	80	32.7	85117	20	66	28.0
85026	21	70	28.3	85057	14	46	21.9	85089	24	80	33.5	85118	23	76	30.3
85027	25	83	34.2	85060	19	63	26.1	85090	20	66	30.1	85119	24	80	31.7
85028	26	86	32.7	85061	17	56	25.5	85091	24	80	29.9	85120	26	86	34.4
85029	26	86	38.8	85062	29	96	41.7	85092	23	76	31.3	85121	23	76	30.8
85030	17	56	24.7	85063	21	70	31.3								

[a] See Table S-5 for job skills descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ (percentage of responses per category X weighted value of category).

Table S-21.--Job Skills Accepted as Entry Level for Employment in Livestock (Beef, Swine, Sheep) Farming.

Job Skill Code No.[a]	N=20 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=20 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=20 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=20 No.	%	Total Weight[b]
85001	13	92	36.0	85031	11	78	35.0	85063	10	71	36.2	85093	13	92	34.6
85002	12	85	31.8	85032	11	78	29.0	85064	12	85	33.6	85094	14	100	35.3
85003	11	78	31.5	85033	12	85	35.0	85065	12	85	31.8	85095	10	71	32.2
85004	12	85	34.3	85034	12	85	35.7	85066	12	85	34.0	85096	10	71	30.8
85005	9	64	30.1	85035	12	85	37.1	85067	10	71	29.4	85097	11	78	27.6
85006	8	57	25.9	85036	11	78	33.6	85068	12	85	36.4	85098	13	92	36.1
85007	8	57	26.6	85037	9	64	25.2	85069	9	64	25.9	85099	9	64	28.7
85008	10	71	28.7	85038	6	42	21.0	85070	12	85	35.4	85100	7	50	25.2
85009	11	78	30.1	85039	9	64	24.8	85071	12	85	33.6	85101	6	42	27.3
85010	12	85	37.1	85040	13	92	33.6	85072	12	85	33.6	85102	11	78	35.0
85011	11	78	32.6	85041	11	78	29.4	85073	12	85	36.8	85103	10	71	29.4
85012	8	57	28.0	85042	10	71	27.6	85074	12	85	32.9	85104	12	85	36.8
85013	11	78	33.6	85043	12	85	35.4	85075	12	85	31.5	85105	13	92	34.3
85014	11	78	32.9	85044	12	85	31.8	85076	12	85	30.4	85106	12	85	35.7
85015	13	92	37.8	85045	12	85	36.4	85077	13	92	38.5	85107	14	100	40.3
85016	12	85	35.7	85046	13	92	41.0	85078	14	100	37.1	85108	14	100	36.1
85017	13	92	39.9	85047	13	92	37.5	85079	11	78	33.3	85109	10	71	28.0
85018	13	92	37.1	85048	12	85	35.4	85080	10	71	31.9	85110	12	85	38.5
85019	13	92	37.5	85049	13	92	40.6	85081	13	92	41.8	85111	12	85	39.2
85020	13	92	37.5	85050	13	92	35.7	85082	13	92	40.3	85112	11	78	29.7
85021	13	92	37.1	85051	10	71	31.5	85083	13	92	39.6	85113	11	78	30.8
85022	11	78	31.8	85052	12	85	34.3	85084	13	92	35.7	85114	13	92	33.9
85023	9	64	24.5	85053	12	85	33.6	85085	13	92	30.8	85115	13	92	39.9
85024	7	50	24.5	85054	9	64	25.9	85086	14	100	33.9	85116	12	85	37.5
85025	9	64	31.5	85055	7	50	24.5	85087	13	92	36.8	85117	9	64	28.7
85026	9	64	28.0	85056	7	50	25.2	85088	12	85	34.0	85118	12	85	31.8
85027	12	85	35.7	85057	7	50	23.8	85089	12	85	34.7	85119	11	78	31.9
85028	10	71	31.5	85060	10	71	33.6	85090	12	85	35.4	85120	11	78	33.3
85029	12	85	40.4	85061	11	78	33.6	85091	11	78	31.5	85121	11	78	32.6
85030	8	57	26.6	85062	13	92	43.9	85092	13	92	34.3				

[a]See Table S-5 for job skills descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-22.--Job Skills Accepted as Entry Level for Employment in Poultry Farming.

Job Skill Code No.[a]	N=6 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=6 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=6 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=6 No.	%	Total Weight[b]
85001	5	83	31.2	85032	4	66	28.0	85067	3	60	30.0	85097	3	50	28.2
85002	5	83	29.9	85033	5	83	32.6	85068	4	66	32.5	85098	3	50	28.2
85003	6	100	41.3	85034	5	83	37.7	85070	4	66	27.9	85099	4	66	24.7
85004	3	50	26.0	85035	5	83	34.4	85071	4	66	27.9	85100	4	66	26.4
85005	5	83	36.0	85036	5	83	32.8	85072	3	50	21.1	85101	4	66	26.4
85006	4	66	29.7	85037	5	83	29.9	85073	4	66	28.0	85102	3	50	26.2
85007	5	83	36.0	85039	3	50	24.6	85074	3	50	21.6	85103	3	50	24.5
85008	3	50	24.0	85040	4	66	28.0	85075	3	50	22.9	85104	4	66	32.8
85009	4	66	29.2	85041	4	66	30.8	85076	3	50	24.5	85105	4	66	30.8
85010	5	83	39.7	85042	3	50	24.5	85077	3	50	27.4	85106	4	66	31.2
85011	6	100	39.2	85043	5	83	36.1	85078	3	50	24.5	85107	5	83	37.6
85012	4	66	32.6	85044	5	83	31.5	85079	3	50	26.2	85108	6	100	35.0
85013	4	66	34.6	85045	4	66	32.6	85080	3	50	26.5	85109	3	50	26.5
85014	4	66	32.8	85046	6	100	46.2	85081	4	66	30.8	85110	3	50	25.7
85015	5	83	34.3	85047	6	100	42.9	85082	4	66	30.8	85111	4	66	30.8
85016	5	83	34.4	85048	6	100	42.9	85083	4	66	29.1	85112	4	66	26.4
85017	6	100	41.3	85049	6	100	43.0	85084	3	50	26.2	85113	4	66	24.7
85018	6	100	39.2	85050	6	100	36.3	85085	3	50	24.5	85114	4	66	27.8
85019	5	83	36.0	85051	4	66	34.5	85086	4	66	29.6	85115	4	66	29.1
85020	5	83	34.4	85052	4	66	30.8	85087	4	66	31.4	85116	4	66	29.1
85021	4	66	29.3	85058	3	50	24.5	85088	3	50	26.5	85118	3	50	24.4
85022	4	66	30.9	85059	3	50	24.5	85089	3	50	26.5	85119	3	50	27.7
85024	3	50	19.6	85060	5	83	29.4	85090	3	50	22.8	85120	5	83	33.1
85025	3	50	29.4	85062	6	100	40.0	85091	3	50	19.8	85121	5	83	31.5
85026	5	83	29.8	85063	5	83	29.4	85093	4	66	29.7				
85027	6	100	39.2	85064	4	66	27.5	85094	4	66	29.6				
85028	5	83	32.7	85065	4	66	26.3	85095	3	50	26.2				
85029	6	100	47.9	85066	3	50	22.8	85096	3	50	24.5				
85031	5	83	42.6												

[a]See Table S-5 for job skills descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-23.--Job Skills Accepted as Entry Level for Employment in Vegetable, Beet, and/or Potato Farming.

Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]
85001	7	53	25.7	85029	9	69	29.6	85070	11	84	35.5	85096	11	84	32.3
85002	8	61	27.3	85031	8	61	30.8	85071	10	76	36.1	85097	8	61	27.0
85003	10	76	30.1	85032	11	84	32.6	85072	9	69	31.7	85098	11	84	31.4
85004	9	69	26.5	85033	10	76	32.1	85073	10	76	34.1	85099	6	46	23.3
85005	9	69	27.3	85034	9	69	33.2	85074	10	76	33.3	85100	7	53	23.5
85006	7	53	21.1	85035	9	69	30.6	85075	8	61	28.8	85101	7	53	26.2
85007	8	61	23.0	85036	7	53	28.0	85076	9	69	30.5	85102	9	69	32.1
85008	6	46	22.1	85037	6	46	21.8	85077	12	92	40.9	85103	10	76	32.2
85009	9	69	31.2	85040	9	69	27.5	85078	12	92	37.4	85104	11	84	36.0
85010	10	76	36.0	85041	10	76	28.7	85079	10	76	35.8	85105	11	84	33.0
85011	11	84	33.1	85042	9	69	26.3	85080	11	84	36.9	85106	13	100	40.7
85012	7	53	26.5	85047	6	46	21.1	85081	12	92	44.8	85107	12	92	39.2
85013	11	84	34.7	85051	7	53	26.6	85082	12	92	38.1	85108	12	92	34.7
85014	10	76	26.2	85052	7	53	24.2	85083	10	76	36.4	85109	11	84	33.4
85015	12	92	36.2	85053	6	46	22.2	85084	12	92	36.2	85110	11	84	36.0
85016	12	92	36.9	85054	6	46	21.3	85085	11	84	33.5	85111	12	92	38.5
85017	10	76	29.2	85056	6	46	26.4	85086	11	84	33.5	85112	9	69	28.3
85018	8	61	30.0	85057	6	46	22.4	85087	12	92	37.1	85113	8	61	28.6
85019	10	76	32.5	85061	7	53	24.3	85088	11	84	35.8	85114	11	84	30.5
85020	10	76	31.8	85062	13	100	44.2	85089	11	84	35.5	85115	13	100	38.4
85021	9	69	32.8	85063	10	76	35.6	85090	9	69	30.9	85116	12	92	36.3
85022	9	69	25.6	85064	10	76	30.4	85091	12	92	30.8	85117	7	53	25.7
85023	8	61	26.1	85065	10	76	32.0	85092	10	76	32.2	85118	9	69	27.9
85025	6	46	23.2	85066	12	92	37.1	85093	11	84	35.4	85119	9	69	29.0
85026	7	53	24.9	85067	11	84	33.9	85094	9	69	29.4	85120	10	76	32.0
85027	8	61	27.3	85068	12	92	40.1	85095	12	92	33.9	85121	10	76	30.3
85028	9	69	24.6	85069	7	53	23.7								

[a] See Table S-5 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-24.--Job Skills Accepted as Entry Level for Employment in the Arboriculture Industry.

Job Skill Code No.[a]	N=7 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=7 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=7 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=7 No.	%	Total Weight[b]
85005	3	42	19.6	85034	5	71	30.8	85060	3	42	22.4	85083	6	85	41.1
85012	3	42	21.0	85035	7	100	50.0	85062	3	42	19.6	85084	5	71	30.8
85013	3	42	19.6	85040	3	42	19.6	85063	3	42	22.4	85085	5	71	26.6
85014	3	42	19.6	85041	3	42	19.6	85064	3	42	22.4	85086	5	71	33.6
85015	3	42	21.0	85042	3	42	19.6	85065	4	57	25.2	85087	4	57	30.8
85016	7	100	37.8	85043	5	71	35.5	85066	4	57	25.2	85088	4	57	26.6
85017	6	85	29.4	85044	7	100	45.3	85067	3	42	21.0	85089	5	71	33.6
85018	5	71	30.8	85045	5	71	33.6	85068	5	71	29.4	85092	3	42	16.8
85019	6	85	36.4	85046	5	71	33.6	85069	7	100	42.5	85096	3	42	19.7
85020	5	71	35.5	85047	5	71	32.2	85070	3	42	22.4	85099	3	42	21.1
85021	7	100	42.5	85048	5	71	33.6	85071	4	57	25.2	85100	5	71	30.8
85022	7	100	46.7	85049	4	57	25.2	85072	4	57	23.8	85101	5	71	29.4
85023	7	100	43.9	85050	6	85	39.2	85073	4	57	28.0	85102	5	71	30.8
85024	7	100	39.2	85051	4	57	29.4	85074	5	71	29.4	85103	5	71	32.2
85025	5	85	39.2	85052	3	42	26.6	85075	5	71	30.6	85104	5	71	29.4
85026	3	42	25.2	85053	3	42	26.6	85076	5	71	30.8	85105	6	85	36.4
85027	7	100	40.6	85054	3	42	25.2	85078	4	57	25.2	85106	7	100	39.2
85028	7	100	40.6	85055	3	42	25.2	85079	4	57	25.2	85107	7	100	41.0
85029	7	100	40.6	85056	3	42	23.8	85080	4	57	25.2	85108	7	100	45.3
85030	7	100	42.0	85057	3	42	23.8	85081	5	71	36.9	85109	3	42	26.6
85031	7	100	42.0	85058	3	42	23.8	85082	7	100	40.6	85110	5	71	33.6
85032	6	85	37.8	85059	4	57	25.2					85111	4	57	32.2
85033	6	85	39.2												

[a]See Table S-7 for job skills descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-25.--Job Skills Accepted as Entry Level for Employment in the Bedding Plant Industry.

Job Skill Code No.[a]	N=10 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=10 No.	%	Total Weight[b]
85009	4	40	23.0	85065	5	50	23.0
85010	4	40	26.0	85066	5	50	23.0
85011	5	50	24.0	85067	4	40	18.0
85012	6	60	30.0	85069	4	40	23.0
85014	4	40	22.0	85073	6	60	28.0
85015	5	50	24.0	85074	5	50	26.0
85016	4	40	15.0	85075	4	40	23.0
85017	4	40	14.0	85076	5	50	25.0
85029	4	40	22.0	85080	4	40	27.0
85030	4	40	21.0	85081	5	50	26.0
85031	4	40	22.0	85082	4	40	23.0
85033	4	40	22.0	85083	6	60	32.0
85036	4	40	19.0	85084	7	70	34.0
85037	4	40	19.0	85085	6	60	29.0
85038	4	40	18.0	85086	7	70	33.0
85039	6	60	27.0	85087	6	60	29.0
85040	7	70	27.0	85088	4	40	24.0
85041	7	70	28.0	85089	7	70	33.0
85042	5	50	25.0	85092	4	40	27.0
85043	4	40	22.0	85103	4	40	21.0
85044	4	40	21.0	85104	4	40	22.0
85063	5	50	23.0	85105	4	40	20.0
85064	5	50	25.0	85109	4	40	21.0

[a]See Table S-7 for job skills descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ (percentage of responses per category X weighted value of category).

Table S-26.--Job Skills Accepted as Entry Level for Employment in the Garden Center Industry.

Job Skill Code No.[a]	N=8 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=8 No.	%	Total Weight[b]
85003	5	62	29.8	85066	5	62	26.0
85009	4	50	28.4	85067	4	50	20.9
85011	5	62	28.1	85073	5	62	27.3
85012	6	75	38.6	85074	4	50	23.6
85014	5	62	28.5	85080	4	50	31.1
85015	5	62	28.1	85081	4	50	23.6
85036	4	50	22.1	85083	6	75	37.5
85037	4	50	22.1	85084	6	75	36.1
85038	4	50	20.9	85085	7	87	37.2
85039	5	62	27.2	85086	7	87	38.1
85040	7	87	31.2	85087	6	75	35.0
85041	7	87	36.2	85088	4	50	28.6
85042	6	75	32.5	85089	7	87	35.6
85063	6	75	27.2	85091	4	50	24.6
85064	5	62	28.5	85092	5	62	38.3
85065	5	62	26.0				

[a]See Table S-7 for job skills descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ (percentage of responses per category X weighted value of category).

Table S-27.--Job Skills Accepted as Entry Level for Employment in the Groundskeeping and/or Park Industry.

Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]
85011	4	44	22.0	85035	8	88	41.8	85060	7	77	30.8	85081	9	100	41.8
85012	4	44	20.9	85040	4	44	20.9	85061	6	66	29.7	85082	9	100	40.7
85016	8	88	35.2	85041	4	44	22.0	85062	7	77	28.6	85083	7	77	38.5
85017	9	100	37.4	85042	4	44	20.9	85063	5	55	26.4	85084	7	77	35.2
85018	8	88	37.4	85043	9	100	41.8	85064	5	55	26.4	85085	6	66	29.7
85019	9	100	40.7	85044	9	100	41.8	85065	7	77	29.7	85086	7	77	36.3
85020	9	100	39.6	85045	6	66	30.8	85066	5	55	26.4	85087	5	55	29.7
85021	8	88	37.4	85046	6	66	30.8	85067	6	66	25.3	85088	5	55	27.5
85022	7	77	37.4	85047	6	66	33.0	85068	6	66	28.6	85089	7	77	34.1
85023	6	66	33.0	85048	6	66	33.0	85069	7	77	34.1	85100	6	66	30.8
85024	7	77	34.1	85049	5	55	26.4	85070	6	66	28.6	85101	6	66	30.8
85025	9	100	41.8	85050	6	66	34.1	85071	7	77	30.8	85102	7	77	34.1
85026	8	88	35.2	85051	5	55	28.6	85072	6	66	27.5	85103	7	77	34.1
85027	7	77	34.1	85052	6	66	28.6	85073	8	88	34.1	85104	7	77	34.1
85028	7	77	35.2	85053	7	77	31.9	85074	7	77	31.9	85105	7	77	35.2
85029	7	77	36.3	85054	7	77	30.8	85075	9	100	37.4	85106	7	77	37.4
85030	7	77	37.4	85055	7	77	30.8	85076	7	77	33.0	85107	7	77	38.5
85031	7	77	38.5	85056	7	77	33.0	85077	7	77	30.8	85108	7	77	37.4
85032	6	66	34.1	85057	6	66	29.7	85078	8	88	33.0	85109	5	55	27.5
85033	8	88	40.7	85058	7	77	31.9	85079	8	88	33.0	85110	4	44	28.6
85034	6	66	30.8	85059	8	88	33.0	85080	8	88	33.0	85111	5	55	31.9

[a]See S-7 for job skills descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-28.--Job Skills Accepted as Entry Level for Employment in the Landscaping Industry.

Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]
85009	6	46	24.8	85033	11	84	41.5	85059	10	76	34.4	85081	11	84	40.6
85011	7	53	25.7	85034	11	84	31.8	85060	10	76	33.3	85082	11	84	40.6
85012	8	61	27.8	85035	13	100	44.6	85061	9	69	30.9	85083	10	76	40.7
85013	6	46	23.9	85040	6	46	21.1	85062	10	76	32.5	85084	10	76	36.0
85014	6	46	23.2	85041	6	46	23.0	85063	10	76	33.0	85085	10	76	33.6
85015	6	46	25.1	85042	6	46	21.9	85064	9	69	31.7	85086	11	84	36.8
85016	12	92	37.3	85043	11	84	38.4	85065	11	84	34.3	85087	9	69	33.9
85017	11	84	35.6	85044	12	92	42.5	85066	10	76	33.3	85088	9	69	31.7
85018	10	76	38.3	85045	11	84	38.8	85067	10	76	30.2	85089	11	84	36.5
85019	12	92	43.2	85046	11	84	36.8	85068	10	76	33.2	85092	6	46	21.7
85020	11	84	37.2	85047	10	76	35.6	85069	11	84	37.2	85100	7	53	29.1
85021	11	84	40.7	85048	10	76	35.2	85070	10	76	34.0	85101	10	76	32.6
85022	11	84	41.5	85049	9	69	26.9	85071	11	84	34.2	85102	9	69	34.0
85023	11	84	41.5	85050	11	84	39.3	85072	11	84	33.6	85103	8	61	33.2
85024	11	84	39.9	85051	10	76	33.4	85073	11	84	36.6	85104	9	69	30.0
85025	12	92	43.2	85052	8	61	34.0	85074	11	84	35.7	85105	12	92	39.3
85026	12	92	37.4	85053	10	76	33.2	85075	12	92	36.4	85106	10	76	35.7
85027	12	92	36.3	85054	10	76	36.8	85076	11	84	34.6	85107	11	84	38.5
85028	11	84	37.2	85055	11	84	36.0	85077	8	61	30.5	85108	10	76	36.0
85029	11	84	38.3	85056	11	84	36.1	85078	11	84	33.0	85109	7	53	28.1
85030	11	84	41.8	85057	9	69	33.2	85079	10	76	34.6	85110	7	53	28.1
85031	11	84	42.6	85058	10	76	34.4	85080	10	76	35.2	85111	7	53	29.6
85032	10	76	33.9												

[a]See Table S-7 for job skill descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight= Δ(percentage of responses per category X weighted value of category).

Table S-29.--Job Skills Accepted as Entry Level for Employment in the Nursery Production Industry.

Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=13 No.	%	Total Weight[b]
85007	6	46	18.9	85030	8	61	29.4	85054	6	46	22.5	85075	8	61	25.1
85009	6	46	24.8	85031	8	61	30.2	85055	6	46	20.9	85076	8	61	25.4
85010	6	46	29.6	85032	7	53	22.6	85056	6	46	22.5	85077	6	46	23.2
85011	8	61	28.4	85033	8	61	30.2	85058	6	46	22.5	85078	6	46	21.7
85012	10	76	32.9	85034	6	46	19.2	85059	7	53	23.5	85079	8	61	26.5
85014	6	46	25.6	85035	7	53	27.9	85060	7	53	22.3	85080	8	61	33.3
85015	7	53	28.0	85039	6	46	22.4	85061	6	46	20.2	85081	9	69	30.6
85016	8	61	24.6	85040	10	76	29.4	85062	7	53	22.7	85082	8	61	29.0
85017	8	61	26.2	85041	10	76	30.6	85063	8	61	28.2	85083	8	61	30.8
85018	7	53	28.8	85042	8	61	29.2	85064	8	61	28.4	85084	9	69	31.8
85019	7	53	27.3	85043	8	61	28.2	85065	9	69	28.2	85085	10	76	33.8
85020	7	53	24.3	85044	8	61	28.6	85066	8	61	27.6	85086	10	76	31.9
85021	6	46	24.8	85045	7	53	23.4	85067	8	61	25.5	85087	9	69	33.6
85022	6	46	24.8	85046	7	53	23.0	85068	8	61	27.4	85088	7	53	27.2
85023	6	46	24.8	85047	7	53	25.0	85069	8	61	27.4	85089	10	76	31.5
85024	6	46	24.0	85048	7	53	25.0	85070	7	53	25.8	85092	6	46	27.2
85025	7	53	26.2	85049	7	53	20.2	85071	8	61	25.5	85105	6	46	21.3
85026	7	53	24.2	85050	7	53	27.2	85072	8	61	25.5	85106	6	46	21.3
85027	7	53	22.3	85051	6	46	20.8	85073	9	69	27.9	85107	6	46	22.5
85028	7	53	24.2	85053	6	46	19.3	85074	9	69	27.9	85108	6	46	22.5
85029	8	61	27.0												

[a] See Table S-7 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ (percentage of responses per category X weighted value of category).

Table S-30.--Job Skills Accepted as Entry Level for Employment in the Turf and Sprinkler Industry.

Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]
85007	4	44	16.5	85032	7	77	33.0	85060	8	88	39.6	85084	7	77	38.5
85008	4	44	20.9	85033	8	88	44.0	85061	8	88	37.4	85085	7	77	35.2
85009	5	55	27.5	85034	7	77	29.7	85062	8	88	39.6	85086	8	88	39.6
85010	5	55	26.4	85035	9	100	45.1	85063	8	88	37.4	85087	7	77	36.3
85011	6	66	29.7	85040	4	44	19.8	85064	7	77	35.2	85088	7	77	33.0
85012	7	77	35.2	85041	4	44	20.9	85065	8	88	36.3	85089	8	88	37.4
85013	5	55	25.3	85042	4	44	20.9	85066	8	88	36.3	85092	4	44	23.1
85014	5	55	24.2	85043	7	77	37.4	85067	7	77	33.0	85094	4	44	17.6
85015	5	55	26.4	85044	9	100	46.2	85068	7	77	35.2	85095	4	44	17.6
85016	8	88	37.4	85045	7	77	37.4	85069	8	88	40.7	85096	5	55	22.0
85017	8	88	35.2	85046	7	77	37.4	85070	9	100	41.8	85097	5	55	22.0
85018	7	77	40.7	85047	7	77	37.4	85071	9	100	39.6	85099	4	44	18.7
85019	8	88	40.7	85048	7	77	35.2	85072	9	100	39.6	85100	5	55	31.9
85020	7	77	35.2	85049	7	77	30.8	85073	8	88	38.5	85101	7	77	34.1
85021	7	77	39.6	85050	8	88	40.7	85074	8	88	38.5	85102	6	66	35.2
85022	7	77	41.8	85051	7	77	33.0	85075	9	100	39.6	85103	6	66	36.3
85023	7	77	39.6	85052	6	66	39.6	85076	8	88	37.4	85104	7	77	31.9
85024	7	77	37.4	85053	8	88	38.5	85077	7	77	36.3	85105	9	100	40.7
85025	8	88	44.0	85054	8	88	42.9	85078	8	88	37.4	85106	8	88	38.5
85026	8	88	38.5	85055	9	100	41.8	85079	8	88	40.7	85107	8	88	40.7
85027	9	100	37.4	85056	9	100	42.9	85080	7	77	37.4	85108	8	88	39.6
85028	8	88	38.5	85057	7	77	38.5	85081	8	88	42.9	85109	5	55	28.6
85029	8	88	39.6	85058	9	100	42.9	85082	8	88	42.9	85110	5	55	28.6
85030	8	88	44.0	85059	8	88	41.8	85083	6	66	41.8	85111	6	66	31.9
85031	8	88	45.1												

[a] See Table S-7 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-31.--Job Skills Accepted as Entry Level for Employment in Farm Implement Repair.

Job Skill Code No.[a]	N=17 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=17 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=17 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=17 No.	%	Total Weight[b]
85001	15	88	40.8	85034	15	88	28.8	85068	11	64	27.9	85102	16	94	37.2
85002	17	100	43.9	85035	11	64	23.6	85069	12	70	30.3	85103	8	47	22.5
85003	15	88	36.3	85036	11	64	27.3	85070	14	82	38.2	85104	13	76	29.2
85004	14	82	36.3	85038	8	47	23.6	85071	13	76	35.7	85105	10	58	23.1
85005	16	94	40.6	85040	8	47	20.6	85072	13	76	30.9	85106	10	58	23.1
85006	16	94	38.9	85041	11	64	28.7	85073	12	70	29.1	85107	13	76	27.4
85007	17	100	37.2	85042	13	76	30.3	85074	12	70	29.1	85108	12	70	27.4
85008	17	100	42.7	85043	11	64	28.5	85075	12	70	29.7	85109	8	44	20.4
85009	17	100	42.8	85044	14	82	33.3	85076	12	70	31.5	85110	11	64	26.1
85010	17	100	48.4	85045	12	70	26.1	85078	7	41	21.9	85111	10	58	22.4
85011	16	94	36.7	85046	9	52	21.3	85079	11	64	28.5	85112	13	76	30.3
85012	16	94	36.5	85047	17	100	43.9	85080	11	64	29.1	85113	15	88	32.9
85013	15	88	36.5	85048	17	100	44.5	85081	11	64	29.1	85114	13	76	29.3
85014	16	94	34.7	85049	17	100	42.6	85082	10	58	24.9	85115	11	64	24.9
85015	14	82	30.3	85050	16	94	38.5	85083	9	52	23.7	85116	15	88	33.3
85016	14	82	30.9	85051	16	94	42.4	85084	10	58	27.9	85117	16	94	37.7
85017	15	88	34.7	85052	16	94	42.5	85085	14	82	36.3	85118	12	70	28.5
85018	9	52	25.5	85053	16	94	42.5	85086	10	58	26.1	85119	15	88	32.3
85019	14	82	32.7	85054	17	100	39.0	85087	9	52	24.9	85120	14	82	35.7
85020	10	58	26.7	85055	16	94	43.7	85088	9	52	24.3	85121	12	70	29.7
85021	12	70	30.3	85056	16	94	40.6	85089	11	64	26.7	85122	15	88	37.7
85023	7	41	22.5	85057	16	94	41.3	85090	11	64	27.9	85123	15	88	37.5
85024	16	94	37.1	85058	17	100	42.1	85091	10	58	26.1	85124	15	88	37.0
85025	16	94	38.3	85059	14	82	34.1	85092	10	58	25.5	85125	15	88	35.2
85026	16	94	35.3	85060	14	82	34.5	85093	10	58	26.1	85126	14	82	33.9
85027	16	94	39.5	85061	14	82	38.1	85094	11	64	27.9	85127	13	76	32.1
85028	16	94	35.3	85062	13	76	31.5	85095	9	52	23.7	85128	14	82	31.5
85029	16	94	36.1	85063	13	76	32.9	85096	9	52	23.7	85129	15	88	35.4
85030	15	88	31.2	85064	12	70	29.1	85097	9	52	21.2	85130	14	82	30.9
85031	16	94	37.7	85065	11	64	27.3	85099	9	52	24.3	85131	16	94	34.3
85032	11	64	26.0	85066	11	64	26.0	85100	14	82	33.3	85132	14	82	31.5
85033	14	82	28.5	85067	11	64	26.6	85101	16	94	39.0	85134	16	94	39.0

85135	15	88	37.1	85171	12	70	29.1	85208	13	76	31.5	85246	15	88	36.4
85136	13	76	31.1	85172	12	70	29.3	85209	8	47	22.5	85247	13	76	32.7
85137	7	41	20.1	85173	12	70	29.7	85211	9	52	21.9				
85138	13	76	32.1	85174	11	64	27.9	85212	16	94	40.2				
85139	12	70	30.3	85175	12	70	29.1	85213	15	88	34.8				
85140	10	58	26.1	85176	12	70	30.3	85214	14	82	28.2				
85141	9	52	23.7	85177	12	70	29.1	85215	9	52	25.5				
85142	13	76	32.1	85178	11	64	26.1	85216	12	70	27.9				
85143	13	76	32.1	85179	13	76	30.3	85217	11	64	25.5				
85144	13	76	32.7	85180	11	64	27.9	85218	12	70	26.7				
85145	13	76	29.1	85181	13	76	31.5	85219	10	58	27.3				
85146	12	70	30.9	85182	12	70	26.7	85220	8	47	21.7				
85147	13	76	32.1	85183	11	64	27.3	85221	12	70	27.9				
85148	15	88	36.5	85184	13	76	28.5	85223	16	94	39.4				
85149	15	88	37.1	85185	13	76	29.1	85224	14	82	30.3				
85150	12	70	34.5	85186	13	76	30.3	85225	15	88	34.0				
85151	17	100	46.3	85187	13	76	30.3	85226	14	82	34.0				
85152	17	100	46.3	85188	13	76	30.9	85227	14	82	33.3				
85153	17	100	44.5	85189	13	76	28.4	85228	12	70	27.5				
85154	17	100	45.7	85190	11	64	27.9	85229	13	76	28.7				
85155	17	100	45.7	85191	13	76	30.3	85230	15	88	34.7				
85156	16	94	42.7	85192	12	70	31.5	85231	17	100	39.6				
85157	12	70	32.7	85193	13	76	31.5	85232	15	88	34.7				
85158	16	94	39.5	85194	12	70	32.7	85233	15	88	36.5				
85159	14	82	31.7	85195	11	64	28.5	85234	13	76	30.9				
85160	14	82	32.3	85196	9	52	24.9	85235	13	76	30.5				
85161	14	82	32.5	85197	10	58	23.1	85236	14	82	32.1				
85162	9	52	23.0	85198	12	70	29.1	85237	13	76	31.1				
85163	10	58	24.9	85199	13	76	33.3	85238	12	70	31.5				
85164	14	82	32.7	85200	13	76	31.5	85239	14	82	34.5				
85165	14	82	32.9	85201	15	88	36.4	85240	8	47	20.7				
85166	15	88	37.7	85202	12	70	27.5	85241	8	47	23.1				
85167	15	88	34.9	85203	13	76	28.1	85242	13	76	30.3				
85168	15	88	34.7	85204	13	76	30.9	85243	14	82	32.7				
85169	16	94	39.6	85205	12	70	29.1	85244	13	76	32.1				
85170	9	52	25.5	85207	10	58	25.4	85245	14	82	33.3				

[a]See Table 5-9 for job skill descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-32.--Job Skills Accepted as Entry Level for Employment in Agricultural Chemical Biological-Technical Services.

Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]
85001	2	40	16.0	85108	2	40	22.0	85159	2	40	18.0
85002	2	40	16.0	85111	2	40	20.0	85160	2	40	16.0
85003	2	40	18.0	85112	2	40	18.0	85163	3	60	26.0
85009	2	40	24.0	85118	2	40	22.0	85164	2	40	20.0
85014	2	40	20.0	85119	2	40	24.0	85166	2	40	20.0
85034	2	40	20.0	85120	3	60	28.0	85167	2	40	20.0
85035	2	40	20.0	85121	2	40	18.0	85168	2	40	20.0
85036	2	40	18.0	85123	2	40	24.0	85170	2	40	22.0
85052	2	40	16.0	85124	2	40	20.0	85172	3	60	26.0
85053	3	60	20.0	85125	3	60	32.0	85173	2	40	18.0
85081.	2	40	22.0	85126	3	60	22.0	85175	2	40	22.0
85082	2	40	22.0	85127	2	40	22.0	85176	2	40	18.0
85091	3	60	22.0	85128	2	40	18.0	85177	2	40	22.0
85092	2	40	22.0	85132	3	60	28.0	85178	2	40	24.0
85093	2	40	20.0	85136	2	40	24.0	85179	2	40	20.0
85094	2	40	20.0	85137	2	40	20.0	85180	2	40	20.0
85095	2	40	20.0	85138	2	40	18.0	85181	2	40	20.0
85096	2	40	16.0	85139	2	40	20.0	85182	2	40	24.0
85097	2	40	18.0	85140	2	40	22.0	85183	2	40	16.0
85098	2	40	20.0	85141	3	60	24.0	85191	2	40	22.0
85099	3	60	24.0	85143	3	60	30.0	85192	2	40	22.0
85100	2	40	20.0	85144	3	60	30.0	85193	3	60	18.0
85101	2	40	16.0	85145	3	60	18.0	85194	3	60	18.0
85103	2	40	20.0	85146	3	60	14.0	85195	3	60	24.0
85105	2	40	16.0	85152	2	40	18.0	85196	3	60	20.0
85106	2	40	18.0	85155	3	60	26.0				

[a]See Table S-11 for job skill descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-33.--Job Skills Accepted as Entry Level for Employment in Animal Laboratory Biological-Technical Services.

Job Skill Code No.[a]	N=5 No.	%	Total Weight[b]
85001	4	80	38.0
85002	4	80	38.0
85003	4	80	34.0
85004	3	60	30.0
85005	2	40	22.0
85008	3	60	24.0
85009	3	60	30.0
85010	3	60	32.0
85014	4	80	32.0
85015	3	60	22.0
85016	2	40	18.0
85017	2	40	18.0
85018	2	40	20.0
85022	3	60	24.0
85023	5	100	40.0
85024	4	80	30.0
85025	3	60	22.0
85029	3	60	28.0
85030	4	80	30.0
85036	3	60	28.0
85039	3	60	26.0
85040	3	60	28.0
85045	2	40	22.0
85048	3	60	30.0
85049	3	60	30.0

[a]See Table S-11 for job skill descriptions.

[b]Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-34.--Job Skills Accepted as Entry Level for Employment in Food Processing Biological-Technical Services.

Job Skill Code No.[a]	N=10 No.	%	Total Weight[b]
85003	4	40	18.0
85081	4	40	22.0
85082	4	40	23.0
85106	4	40	20.0
85108	4	40	22.0
85111	4	40	21.0
85112	4	40	20.0
85118	5	50	25.0
85120	4	40	21.0
85123	4	40	23.0
85125	5	50	29.0
85126	4	40	20.0
85128	4	40	24.0
85163	5	50	21.0

[a] See Table S-11 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ (percentage of responses per category X weighted value of category).

Table S-35.--Job Skills Accepted as Entry Level for Employment in Grain, Feed, and/or Seed Biological-Technical Services.

Job Skill Code No.[a]	N=15 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=15 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=15 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=15 No.	%	Total Weight[b]
85001	4	80	36.0	85037	3	60	24.0	85093	3	60	26.0	85138	4	80	28.0
85002	4	80	36.0	85039	4	80	34.0	85094	2	40	22.0	85139	2	40	22.0
85003	2	40	22.0	85045	2	40	22.0	85095	2	40	22.0	85140	3	60	28.0
85004	3	60	24.0	85047	4	80	32.0	85096	3	60	22.0	85141	3	60	26.0
85008	2	40	24.0	85048	3	60	22.0	85097	2	40	16.0	85142	3	60	26.0
85009	4	80	44.0	85049	3	60	28.0	85098	3	60	28.0	85143	2	40	20.0
85010	3	60	28.0	85050	4	80	36.0	85099	2	40	16.0	85144	3	60	28.0
85011	3	60	22.0	85051	4	80	36.0	85100	2	40	18.0	85145	3	60	18.0
85012	2	40	24.0	85052	4	80	32.0	85101	3	60	26.0	85146	3	60	20.0
85013	2	40	24.0	85053	4	80	32.0	85102	3	60	28.0	85149	3	60	26.0
85014	4	80	38.0	85058	2	40	22.0	85103	3	60	26.0	85150	2	40	24.0
85015	3	60	26.0	85059	2	40	22.0	85104	2	40	18.0	85151	3	60	26.0
85016	3	60	24.0	85060	2	40	22.0	85105	3	60	22.0	85152	2	40	22.0
85017	3	60	24.0	85061	2	40	22.0	85106	2	40	18.0	85153	2	40	24.0
85018	3	60	24.0	85062	3	60	30.0	85109	2	40	18.0	85154	2	40	20.0
85019	3	60	24.0	85063	2	40	24.0	85110	2	40	14.0	85155	2	40	20.0
85020	3	60	22.0	85064	3	60	28.0	85111	2	40	14.0	85156	3	60	28.0
85021	2	40	18.0	85065	2	40	20.0	85112	2	40	14.0	85163	2	40	22.0
85022	3	60	22.0	85067	3	60	28.0	85113	2	40	14.0	85164	2	40	22.0
85023	3	60	28.0	85068	2	40	16.0	85114	2	40	18.0	85166	2	40	20.0
85024	2	40	16.0	85069	3	60	22.0	85115	2	40	14.0	85167	2	40	18.0
85025	3	60	24.0	85070	3	60	24.0	85116	2	40	12.0	85168	2	40	20.0
85029	3	60	26.0	85071	3	60	24.0	85517	2	40	14.0	85172	2	40	20.0
85030	3	60	26.0	85072	3	60	22.0	85118	2	40	16.0	85175	2	40	16.0
85031	3	60	30.0	85073	2	40	20.0	85120	2	40	18.0	85178	2	40	22.0
85032	3	60	32.0	85075	2	40	20.0	85133	3	60	26.0	85182	2	40	20.0
85033	3	60	32.0	85080	2	40	18.0	85134	3	60	26.0	85193	2	40	18.0
85034	4	80	40.0	85090	3	60	22.0	85135	3	60	26.0	85194	2	40	18.0
85035	5	100	42.0	85091	3	60	22.0	85136	4	80	32.0	85195	2	40	18.0
85036	4	80	28.0	85092	3	60	26.0	85137	3	60	26.0	85196	2	40	16.0

[a] See Table S-11 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

Table S-36.--Job Skills Accepted as Entry Level for Employment in Waste Disposal Biological-Technical Services.

Job Skill Code No.[a]	N=9 No.	%	Total Weight[b]
85081	5	50	26.4
85082	4	44	24.2
85083	5	55	24.2
85085	4	44	20.9
85086	4	44	20.9
85087	5	55	25.3
85088	4	44	24.2
85089	5	55	26.4
85170	4	44	20.9
85176	4	44	17.6

[a] See Table S-11 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total Weight=Δ (percentage of responses per category X weighted value of category).

Table S-37.--Job Skills Accepted as Entry Level for Employment in Water Resources Biological-Technical Services.

Job Skill Code No.[a]	N=6 No.	%	Total Weight[b]	Job Skill Code No.[a]	N=6 No.	%	Total Weight[b]
85003	3	50	26.2	85170	4	66	29.6
85081	4	66	31.0	85171	3	50	19.5
85082	4	66	31.0	85172	3	50	19.5
85083	3	50	24.6	85173	3	50	17.6
85085	3	50	22.9	85176	4	66	24.3
85087	3	50	25.7	85177	3	50	22.9
85088	3	50	27.7	85178	3	50	24.5
85089	3	50	24.6	85179	3	50	17.6
85125	3	50	24.5	85180	3	50	17.6
85126	3	50	18.3	85181	3	50	17.6
85132	3	50	22.5	85195	3	50	19.5
85160	3	50	19.5	85196	3	50	16.0
85163	3	50	22.5				

[a] See Table S-11 for job skill descriptions.

[b] Each skill response was weighted according to its relative importance as follows: Not Needed=1; Minor Importance=2; Some Importance=3; Very Important=4; and Essential=5. Total weight=Δ(percentage of responses per category X weighted value of category).

SERIES E

DISPOSITION OF JOB KNOWLEDGES ASSOCIATED WITH
ACCEPTED JOB SKILLS FOR ENTRY

Table S-38.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Dairy Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502	X	
85002	85501		X
	85503		X
	85504		X
85003	85505	X	
85004	85504		X
85005	85505	X	
	85506		X
	85507	X	
85006	85506		X
85007	85508	X	
	85509		X
	85510		X
85008	85511	X	
	85512		X
	85513		X
	85514		X
	85515		X
85009	85513		X
85010	85516	X	
	85517	X	
85011	85518		X
85012	85519		X
	85520		X
	85521		X
85013	85522	X	
	85523		X
85014	85524	X	
	85525	X	
	85526	X	
85015	85528	X	
	85529	X	
	85530	X	
	85647		X
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535	X	
85018	85527	X	
	85536	X	
85019	85537	X	
	85538	X	
85020	85539	X	
	85540	X	
	85541	X	
	85542		X
85021	85543		X
	85540	X	
	85541	X	
85022	85542		X
85023	85543		X
85025	85546		X
	85547		X
85026	85548	X	
	85549	X	
	85550	X	
	85551		X
85027	85552	X	
	85553	X	
	85554	X	
	85555	X	
	85556	X	
85028	85557	X	
85029	85536	X	
	85566	X	
85030	85558		X
	85559	X	
85031	85559	X	
85032	85560		X
	85561	X	
85033	85560		X
	85561	X	
85034	85562	X	
85035	85563	X	
85036	85564	X	
	85565	X	
	85566	X	
	85567		X
85037	85568		X
85038	85569		X
	85570		X
85039	85569		X
	85570		X
85040	85571		X
85041	85571		X
85042	85571		X
85043	85572	X	
	85576	X	
85044	85573		X
85045	85574	X	
	85575		X
85046	85576	X	

85047	85576	X	
	85577	X	
	85578	X	
85048	85578	X	
	85579	X	
	85580	X	
85049	85581		X
	85582		X
	85583	X	
85050	85584	X	
	85585	X	
	85586	X	
85051	85587	X	
85052	85588	X	
85053	85589	X	
85054	85589	X	
85055	85589	X	
85056	85590	X	
85057			
85060	85593		X
	85594		X
85061	85595		X
	85596		X
85062	85599	X	
85063	85597		X
	85598		X
	85600		X
85064	85601	X	
85065	85601	X	
85066	85602		X
	85604	X	
85067	85607		X
	85605		X
	85608	X	

85068	85603		X
	85606	X	
85069	85609		X
	85608	X	
85070	85610		X
	85611		X
	85603		X
	85612		X
85071			
85072			
85073	85614		X
85074	85615		X
85075	85613		X
85076	85616		X
85077	85616		X
	85617	X	
85078	85617	X	
85079	85618		X
85080			
85081	85620	X	
85082	85620	X	
85083	85620	X	
	85621	X	
85084	85622	X	
85085	85623		X
85086	85624		X
85087	85625		X
85088	85626		X
85089	85627	X	
	85628	X	
85090	85629		X

85091	85630		X
85092	85631		X
85093	85632		X
85094	85632		X
	85633		X
85095	85634		X
85096	85635		X
	85636		X
85097	85637		X
85098	85638	X	
85099	85639		X
85100	85639		X
85102	85640	X	
	85641	X	
85103	85642	X	
85104	85643	X	
	85644	X	
85105	85644	X	
85106	85645	X	
	85646	X	
85107	85646	X	
85108	85646	X	
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649	X	
85114	85650	X	
	85651	X	
85115	85652	X	

Table S-38.--Continued.

Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85116	85653	X		85118	85655	X		85120	85657	X	
85117	85654		X	85119	85656		X	85121	85658		X

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-39.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Bush and/or Vine Fruit Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502	X	
85002	85501		X
	85503	X	
	85504	X	
85003	85505	X	
85004	85504	X	
85005	85505	X	
	85506	X	
	85507		X
85006	85506	X	
85007	85508		X
	85509	X	
	85510	X	
85008	85511		X
	85512	X	
	85513	X	
	85514	X	
	85515	X	
85009	85513	X	
85010	85516	X	
	85517	X	
85011	85518	X	
85012	85519	X	
	85520	X	
	85521		X
85013	85522	X	
	85523		X
85014	85524	X	
	85525	X	
	85526	X	
85015	85528	X	
	85529		X
	85530		X
	85547	X	
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535	X	
85018	85527	X	
	85536	X	
85019	85537	X	
	85538	X	
85020	85539	X	
	85540	X	
	85541	X	
	85542		X
85021	85543	X	
	85540	X	
	85541	X	
85022	85542		X
85023	85543	X	
85024	85544	X	
	85545	X	
85025	85546		X
	85547	X	
85026	85548		X
	85549		X
	85550		X
	85551		X
85027	85552	X	
	85553	X	
	85554		X
	85555		X
	85556		X
85028	85557		X
85029	85556		X
	85566	X	
85031	85559		X
85032	85560	X	
	85561	X	
85033	85560	X	
	85561	X	
85034	85562	X	
85035	85563	X	
85036	85564		X
	85565		X
	85566	X	
	85567	X	
85038	85569		X
	85570		X
85041	85571	X	
85062	85599		X
85063	85597		X
	85598		X
	85600		X
85064	85601	X	
85065	85601	X	
85066	85602		X
	85604		X
85067	85605		X
	85607		X
	85608	X	
85068	85603		X
	85606		X

85069	85609 85608	X	X
85070	85610 85611 85603 85612		X X X X
85071			
85072			
85073	85614		X
85074	85615		X
85075	85613		X
85076	85616		X
85077	85616 85617		X X
85078	85617		X
85079	85618		X
85080			
85081	85620	X	
85082	85620	X	
85083	85620 85621	X X	
85084	85622	X	
85085	85623		X
85086	85624		X
85087	85625	X	
85088	85626	X	
85089	85627 85628	X X	
85090	85629	X	
85091	85630	X	
85092	85631	X	
85093	85632	X	
85094	85632 85633	X X	
85095	85634	X	
85096	85635 85636	X X	
85097	85637	X	
85098	85638	X	
85099	85639	X	
85100	85639	X	
85101	85639	X	
85102	85640 85641	X X	
85103	85642	X	
85104	85643 85644	X X	
85105	85644	X	
85106	85645 85646	X X	
85107	85646	X	
85108	85[illegible]5	X	
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649	X	
85114	85650 85651	X X	
85115	85652	X	
85116	85653	X	
85117	85654	X	
85118	85655		X
85119	85656		X
85120	85657	X	
85121	85658	X	

[a]See Table S-5 for job skill descriptions.
[b]See Table S-6 for job knowledge descriptions.
[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-40.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Tree Fruit Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501	X	
	85502	X	
85002	85501	X	
	85503	X	
	85504	X	
85003	85505	X	
85004	85504	X	
85005	85505	X	
	85506	X	
	85507	X	
85006	85506	X	
85007	85508	X	
	85509	X	
	85510	X	
85008	85511	X	
	85512		X
	85513		X
	85514	X	
	85515	X	
85009	85513		X
85010	85516	X	
	85517	X	
85011	85518	X	
85012	85519	X	
	85520	X	
	85521		X
85013	85522	X	
	85523	X	
85014	85524	X	
	85525	X	
	85526	X	
85015	85528	X	
	85529	X	
	85530	X	
	85547	X	
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535	X	
85018	85527	X	
	85536	X	
85019	85537	X	
	85538	X	
85020	85539	X	
	85540	X	
	85541	X	
	85542	X	
85021	85543	X	
	85540	X	
	85541	X	
85022	85542	X	
85023	85543	X	
85024	85544	X	
	85545	X	
85025	85546		X
	85547	X	
85026	85548	X	
	85549	X	
	85550	X	
	85551	X	
85027	85552	X	
	85553	X	
	85554	X	
	85555	X	
	85556	X	
85028	85557	X	
85029	85556	X	
	85566	X	
85030	85558		X
	85559	X	
85031	85559	X	
85032	85560	X	
	85561	X	
85033	85560	X	
	85561	X	
85034	85562	X	
85035	85563		X
85036	85564	X	
	85565	X	
	85566	X	
	85567	X	
85037	85568		X
85038	85569		X
	85570		X
85039	85569		X
	85570		X
85040	85571		X
85041	85571		X
85042	85571		X
85043	85572	X	
	85576	X	
85044	85573		X
85045	85574		X
	85575		X

85046	85576	X	
85047	85576	X	
	85577	X	
	85578	X	
85048	85578	X	
	85579	X	
	85580	X	
85049	85581		X
	85582		X
	85583		X
85050	85584		X
	85585		X
	85586		X
85051	85587		X
85052	85588		X
85053	85589		X
85054	85589		X
85055	85589		X
85056	85590	X	
85057			
85058	85591		X
	85592		X
85059	85592		X
85061	85595		X
	85596	X	
85062	85599	X	
85063	85597		X
	85598		X
	85600		X
85064	85601	X	
85065	85601	X	
85066	85602	X	
	85604	X	
85067	85605	X	
	85607	X	
	85608	X	

85068	85603	X	
	85606	X	
85069	85609		X
	85608	X	
85070	85610		X
	85611		X
	83603	X	
	85612	X	
85071			
85072			
85073	85614	X	
85074	85615	X	
85075	85613	X	
85076	85616	X	
85077	85616	X	
	85617	X	
85078	85617	X	
85079	85618		X
85080			
85081	85620	X	
85082	85620	X	
85083	85620	X	
	85621	X	
85084	85622	X	
85085	85623	X	
85086	85624	X	
85087	85625	X	
85088	85626	X	
85089	85627	X	
	85628	X	
85090	85629	X	
85091	85630	X	

85092	85631	X	
85093	85632	X	
85094	85632	X	
	85633	X	
85095	85634	X	
85096	85635	X	
	85636		X
85097	85637		X
85098	85638	X	
85099	85639		X
85100	85639		X
85101	85639		X
85102	85640	X	
	85641	X	
85103	85642	X	
85104	85643	X	
	85644	X	
85105	85644	X	
85106	85645	X	
	85646	X	
85107	85646	X	
85108	85646	X	
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649	X	
85114	85650	X	
	85651	X	
85115	85652	X	
85116	85653	X	

Table S-40.--Continued.

Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85117	85654	X									
85118	85655	X									
85119	85656	X									
85120	85657	X									
85121	85658		X								

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-41.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Grain and/or Bean Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502	X	
85002	85501		X
	85503	X	
	85504	X	
85003	85505	X	
85004	85504	X	
85005	85505	X	
	85506	X	
	85507		X
85006	85506	X	
85007	85508		X
	85009		X
	85010	X	
85008	85511		X
	85512		X
	85513		X
	85514		X
	85515		X
85009	85513		X
85010	85516	X	
	85517	X	
85011	85518	X	
85012	85519		X
	85520		X
	85521		X
85013	85522	X	
	85523		X
85014	85524	X	
	85525	X	
	85526	X	
85015	85528	X	
	85529		X
	85530	X	
	85547		X
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535	X	
85018	85527	X	
	85536	X	
85019	85537	X	
	85538	X	
85020	85539	X	
	85540	X	
	85541	X	
	85542		X
85021	85543		X
	85540	X	
	85541	X	
85022	85542		X
85023	85543		X
85024	85544		X
	85545		X
85025	85546		X
	85547		X
85026	85548		X
	85549	X	
	85550		X
	85551		X
85027	85552	X	
	85553	X	
	85554	X	
	85555	X	
	85556	X	
85028	85557		X
85029	85556	X	
	85566	X	
85030	85558		X
	85559		X
85031	85559		X
85032	85560		X
	85561	X	
85033	85560		X
	85561	X	
85034	85562	X	
85035	85563	X	
85036	85564	X	
	85565	X	
	85566	X	
	85567		X
85037	85568		X
85039	85569		X
	85570		X
85040	85571		X
85041	85571		X
85042	85571		X
85043	85572		X
	85576		X
85044	85573		X
85045	85574		X
	85575		X
85046	85576		X

85047	85576		X
	85577	X	
	85578	X	
85048	85578	X	
	85579	X	
	85580		X
85049	85581	X	
	85582		X
	85583	X	
85050	85584	X	
	85585		X
	85586		X
85051	85587		X
85052	85588		X
85053	85589	X	
85054	85589	X	
85055	85589	X	
85056	85590		X
85057			
85060	85593		X
	85594		X
85061	85595		X
	85596	X	
85062	85599	X	
85063	85597		X
	85598		X
	85600		X
85064	85601		X
85065	85601		X
85066	85602		X
	85604		X
85067	85607		X
	85605		X
	85608	X	
85068	85603		X
	85606		X

85069	85609		X
	85608	X	
85070	85610		X
	85611		X
	85612		X
	85603		X
85071			
85072			
85073	85614		X
85074	85615		X
85075	85613		X
85076	85616		X
85077	85616		X
	85617		X
85078	85617		X
85079	85618		X
85080			
85081	85620	X	
85082	85620	X	
85083	85620	X	
	85621	X	
85084	85622	X	
85085	85623		X
85086	85624		X
85087	85625	X	
85088	85626	X	
85089	85627		X
	85628	X	
85090	85629		X
85091	85630		X
85092	85631		X

85093	85632		X
85094	85632		X
	85633	X	
85095	85634	X	
85096	85635	X	
	85636		X
85097	85637		X
85098	85638	X	
85099	85639		X
85100	85639		X
85101	85639		X
85102	85640	X	
	85641	X	
85103	85642	X	
85104	85643	X	
	85644	X	
85105	85644	X	
85106	85645	X	
	85646	X	
85107	85646	X	
85108	85646	X	
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649		X
85114	85650	X	
	85651	X	
85115	85652	X	
85116	85653	X	

Table S-41.--Continued.

Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85117	85654		X								
85118	85655		X								
85119	85656		X								
85120	85657	X									
85121	85658		X								

[a] See Table S-5 for job skill descriptions.

[b] See Table S-6 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-42.—Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Livestock (Beef, Swine, Sheep) Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502	X	
85002	85501		X
	85503		X
	85504	X	
85003	85505	X	
85004	85504	X	
85005	85505	X	
	85506	X	
	85507		X
85006	85506	X	
85007	85508	X	
	85509		X
	85510	X	
85008	85511	X	
	85512	X	
	85513	X	
	85514		X
	85515		X
85009	85513	X	
85010	85516	X	
	85517	X	
85011	85518	X	
85012	85519		X
	85520		X
	85521		X
85013	85522	X	
	85523		X
85014	85524	X	
	85525	X	
	85526	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85015	85528	X	
	85529	X	
	85530	X	
	85547		X
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535	X	
85018	85527	X	
	85536	X	
85019	85537	X	
	85538	X	
85020	85539	X	
	85540	X	
	85541	X	
	85542	X	
85021	85543	X	
	85541	X	
	85540	X	
85022	85542	X	
85023	85543	X	
85024	85544		X
	85545		X
85025	85546		X
	85547		X
85026	85548	X	
	85549	X	
	85550	X	
	85551	X	
85027	85552	X	
	85553	X	
	85554	X	
	85555	X	
	85556	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85028	85557	X	
85029	85556	X	
	85566	X	
85030	85558		X
	85559	X	
85031	85559	X	
85032	85560		X
	85561	X	
85033	85560		X
	85561	X	
85034	85562	X	
85035	85563	X	
85036	85564	X	
	85565	X	
	85566	X	
	85567	X	
85037	85568		X
85038	85569		X
	85570	X	
85039	85569		X
	85570	X	
85040	85571		X
85041	85571		X
85042	85571		X
85043	85572	X	
	85576	X	
85044	85573		X
85045	85574		X
	85575		X

85046	85576	X	
85047	85576	X	
	85577	X	
	85578	X	
85048	85578	X	
	85579	X	
	85580	X	
85049	85581	X	
	85582	X	
	85583	X	
85050	85584	X	
	85585	X	
	85586		X
85051	85587	X	
85052	85588	X	
85053	85589	X	
85054	85589	X	
85055	85589	X	
85056	85590	X	
85057			
85060	85593		X
	85594	X	
85061	85596	X	
	85595		X
85062	85599	X	
85063	85597		X
	85598		X
	85600		X
85064	85601		X
85065	85601		X
85066	85602		X
	85604	X	
85067	85607		X
	85605		X
	85608	X	

85068	85603	X	
	85606		X
85069	85608	X	
	85609		X
85070	85610		X
	85611		X
	85612		X
	85603	X	
85071			
85072			
85073	85614		X
85074	85615		X
85075	85613		X
85076	85616		X
85077	85616		X
	85617		X
85078	85617		X
85079	85618		X
85080			
85081	85620	X	
85082	85620	X	
85083	85620	X	
	85621		X
85084	85622	X	
85085	85623		X
85086	85624		X
85087	85625	X	
85088	85626	X	
85089	85627		X
	85628	X	
85090	85629		X

85091	85630		X
85092	85631		X
85093	85632		X
85094	85632		X
	85633		X
85095	85634	X	
85096	85635	X	
	85636		X
85097	85637		X
85098	85638	X	
85099	85639		X
85100	85639		X
85101	85639		X
85102	85640	X	
	85641	X	
85103	85642	X	
85104	85643		X
	85644	X	
85105	85644	X	
85106	85646	X	
	85645	X	
85107	85646	X	
85108	85646	X	
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649		X
85114	85650	X	
	85651	X	

119

E

Table S-42.--Continued.

Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85115	85652	X									
85116	85653	X									
85117	85654	X									
85118	85655		X								
85119	85656		X								
85120	85657	X									
85121	85658	X									

[a] See Table S-5 for job skill descriptions.

[b] See Table S-6 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table 3-63.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Poultry Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502	X	
85002	85501		X
	85503	X	
	85504	X	
85003	85505	X	
85004	85504	X	
85005	85505	X	
	85506	X	
	85507		X
85006	85506	X	
85007	85508	X	
	85509		X
	85510		X
85008	85511	X	
	85512	X	
	85513	X	
	85514		X
	85515		X
85009	85513	X	
85010	85516	X	
	85517	X	
85011	85518	X	
85012	85519	X	
	85520		X
	85521		X
85013	85522	X	
	85523		X
85014	85524	X	
	85525		X
	85526	X	
85015	85528	X	
	85529		X
	85530		X
	85547	X	
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535	X	
85018	85527		X
	85536	X	
85019	85537		X
	85538	X	
85020	85539		X
	85540	X	
	85541	X	
	85542	X	
85021	85543		X
	85540	X	
	85541	X	
85022	85542	X	
85024	85544		X
	85545		X
85025	85546	X	
	85547	X	
85026	85548	X	
	85549	X	
	85550		X
	85551	X	
85027	85552	X	
	85553	X	
	85554	X	
	85555	X	
	85556	X	
85028	85557		X
85029	85556	X	
	85566	X	
85031	85559		X
85032	85560		X
	85561	X	
85033	85560		X
	85561	X	
85034	85562		X
85035	85563	X	
85036	85564	X	
	85565	X	
	85566	X	
	85567	X	
85037	85568		X
85039	85569	X	
	85570	X	
85040	85571	X	
85041	85571	X	
85042	85571	X	
85043	85572		X
	85576		X
85044	85573		X
85045	85574		X
	85575		X
85046	85576		X
85047	85576		X
	85578		X
	85577		X

85048	85578		X
	85579		X
	85580		X
85049	85581		X
	85582	X	
	85583	X	
85050	85584	X	
	85585		X
	85586		X
85051	85587		X
85052	85588		X
85058	85591		X
	85592		X
85059	85592		X
85060	85593		X
	85594		X
85062	85599	X	
85063	85597		X
	85598		X
	85600		X
85064	85601		X
85065	85601		X
85066	85602		X
	85604		X
85067	85605		X
	85608		X
	85607		X
85068	85603		X
	85606		X
85070	85610		X
	85611	X	
	85603		X
	85612		X
85071			
85072			
85073	85614		X
85074	85615		X

85075	86613		X
85076	85616		X
85077	85616		X
	85617		X
85078	85617		X
85079	85618		X
85080			
85081	85620	X	
85082	85620	X	
85083	85620	X	
	85621		X
85084	85622		X
85085	85623		X
85086	85624	X	
85087	85625	X	
85088	85626	X	
85089	85627		X
	85628	X	
85090	85629	X	
85091	85630		X
85093	85632		X
85094	85632		X
	85633		X
85095	85634		X
85096	85635		X
	85636	X	
85097	85637		X
85098	85638	X	
85099	85639	X	
85100	85639	X	

85101	85639	X	
85102	85640	X	
	85641	X	
85103	85642	X	
85104	85643	X	
	85644	X	
85105	85644	X	
85106	85645	X	
	85646		X
85107	85646		X
85108	85646		X
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649	X	
85114	85650	X	
	85651	X	
85115	85652	X	
85116	85653	X	
85118	85655		X
85119	85656	X	
85120	85657	X	
85121	85658	X	

[a] See Table S-5 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-44.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Vegetable, Beet, and/or Potato Farming.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502		X
85002	85501		X
	85503	X	
	85504	X	
85003	85505		X
85004	85504	X	
85005	85505		X
	85506		X
	85507		X
85006	85506		X
85007	85508		X
	85509		X
	85510		X
85008	85511		X
	85512		X
	85513		X
	85514		X
	85515		X
85009	85513		X
85010	85516		X
	85517	X	
85011	85518	X	
85012	85519		X
	85520		X
	85521		X
85013	85522	X	
	85523		X
85014	85524	X	
	85525		X
	85526		X
85015	85528	X	
	85529	X	
	85530	X	
	85547		X
85016	85531	X	
85017	85532	X	
	85533	X	
	85534	X	
	85535		X
85018	85527		X
	85536	X	
85019	85537	X	
	85538	X	
85020	85539	X	
	85540	X	
	85541	X	
	85542		X
85021	85543		X
	85540	X	
	85541	X	
85022	85542		X
85023	85543		X
85025	85546		X
	85547		X
85026	85548	X	
	85549	X	
	85550		X
	85551		X
85027	85552		X
	85553		X
	85554		X
	85555		X
	85556		X
85028	85557		X
85029	85556		X
	85566	X	
85031	85559		X
85032	85560		X
	85561	X	
85033	85560		X
	85561	X	
85034	85562	X	
85035	85563	X	
85036	85564	X	
	85565	X	
	85566	X	
	85567		X
85037	85568		X
85040	85571		X
85041	85571		X
85042	85571		X
85047	85576		X
	85578		X
	85577		X
85051	85587		X
85052	85588		X
85053	85589		X
85054	85589		X
85056	85590		X
85057			

85061	85595 85596		X X
85062	85599	X	
85063	85597 85598 85600		X X X
85064	85601		X
85065	85601		X
85066	85602 85604		X X
85067	85607 85605 85608		X X X
85068	85603 85606		X X
85069	85609 85608		X X
85070	85610 85611 85603 85612		X X X X
85071			
85072			
85073	85614		X
85074	85615		X
85075	85613		X
85076	85616		X
85077	85616 85617		X X
85078	85617		X
85079	85618		X
85080			

85081	85620	X	
85082	85620	X	
85083	85620 85621	X X	
85084	85622	X	
85085	85623	X	
88086	85624	X	
85087	85625	X	
85088	85626	X	
85089	85627 85628	X X	
85090	85629	X	
85091	85630		X
85092	85631		X
85093	85632		X
85094	85632 85633	X	X
85095	85634	X	
85096	85635 85636	X	X
85097	85637		X
85098	85638	X	
85099	85639	X	
85100	85639	X	
85101	85639	X	
85102	85640 85641	X X	
85103	85642	X	

85104	85643 85644	X X	
85105	85644	X	
85106	85645 85646	X X	
85107	85646	X	
85108	85646	X	
85109			
85110	85647	X	
85111	85647	X	
85112	85648	X	
85113	85649	X	
85114	85650 85651	X X	
85115	85652	X	
85116	85653	X	
85117	85654		X
85118	85655	X	
85119	85656		X
85120	85657	X	
85121	85658	X	

[a]See Table 5-5 for job skill descriptions.

[b]See Table 5-6 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table 3-48.—Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Arboriculture Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85005	85502		X
	85503		X
85012	85508		X
	85509		X
	85510		X
85013	85509		X
85014	85510		X
	85511		X
85015	85512		X
85016	85513	X	
85017	85514		X
85018	85514		X
85019	85532		X
	85514		X
	85531		X
85020	85516	X	
	85531		X
	85532		X
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520	X	
85023	85517	X	
	85518	X	
	85519	X	
	85520	X	
85024	85517	X	
	85518	X	
	85519	X	
	85520	X	
85025	85515	X	
	85521	X	
	85522		X
85026	85521	X	
	85522		X
	85523	X	
85027	85524	X	
85028	85524	X	
	85526	X	
	85527	X	
85029	85524	X	
	85525	X	
	85526	X	
85030	85528	X	
85031	85527	X	
85032	85529		X
85033	85528	X	
	85530	X	
	85527	X	
	85534	X	
85034	85531		X
	85532		X
	85533		X
85035			
85040	85540		X
	85541		X
85041	85540		X
	85541		X
85042	85540		X
	85541		X
85043	85543	X	
	85542	X	
	85545		X
85044	85544	X	
85045	85543	X	
	85546		X
85046	85546		X
85047	85547	X	
85048	85548	X	
85049	85549		X
85050	85550	X	
85051	85551		X
	85552		X
85052	85553		X
85053	85554		X
85054	85555		X
85055	85555		X
85056	85556	X	
	85557	X	
85057	85555		X
85058	85558	X	
85059	85559	X	
85060	85560		X
85062	85561	X	
85063	85562	X	
	85563	X	
	85572	X	

85064	85563	X	
85065	85563	X	
85066	85564	X	
85067	85565		X
85068	85565	X	
85069	85567 85568	X X	
85070	85569		X
85071	85570		X
85072	85571		X
85073	85572	X	
85074	85573	X	
85075	85574	X	
85076	85575	X	
85078	85577	X	
85079	85578	X	
85080			
85081	85519 85520	X X	
85082	85519 85520	X X	
85083	85579 85581 85584		X X X
85084	85583		X
85085	85583		X
85086	85580 85582	X	X
85087	85580		X
85088	85584 85579 85581		X X X
85089	85584 85579		X X
85092	85579		X
85096	85589		X
85099	85586 85587 85588		X X X
85100	85591 85592 85593	X	 X X
85101	85591	X	
85102	85592 85593 85594	 X	X X
85103	85592		X
85104	85593		X
85105	85594	X	
85106	85595 85601	X X	
85107	85596 85601	X X	
85108	85597	X	
85109	85598 85599 85601	 X	X X
85110	85600		X
85111	85601	X	

[a]See Table S-7 for job skill descriptions.

[b]See Table S-8 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-46.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Bedding Plant Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85009	85504		X
85010	85507		X
	85508		X
85011	85508		X
85012	85508		X
	85509		X
	85510		X
85014	85510		X
	85511		X
85015	85512		X
85016	85513		X
85017	85514		X
85029	85524		X
	85525		X
	85526		X
85030	85528	X	
85031	85527	X	
85033	85528	X	
	85530		X
	85527	X	
	85534		X
85036	85535		X
85037	85536		X
85038	85537		X
85039	85538		X
	85539		X

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85040	85540		X
	85541		X
85041	85540		X
	85541		X
85042	85540		X
	85541		X
85043	85542	X	
	85543	X	
	85545	X	
85044	85544	X	
85063	85562		X
	85563		X
	85572		X
85064	85563		X
85065	85563		X
85066	85564		X
85067	85565		X
85069	85567		X
	85568	X	
85073	85572		X
85074	85573		X
85075	85574		X
85076	85575		X
85090			

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85081	85519	X	
	85520		X
85082	85519	X	
	85520		X
85083	85579		X
	85581	X	
	85584	X	
85084	85583	X	
85085	85583	X	
85086	85580	X	
	85582	X	
85087	85580	X	
85088	85584	X	
	85579		X
	85581	X	
85089	85584	X	
	85579		X
85092	85579		X
85103	85592		X
85104	85593		X
85105	85594		X
85109	85598		X
	85599		X
	85601		X

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-47.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Garden Center Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85003	85503		X
	85504		X
	85505		X
	85506		X
85009	85504		X
85011	85508	X	
85012	85508	X	
	85509		X
	85510		X
85014	85510		X
	85511		X
85015	85512	X	
85036	85535		X
85037	85536		X
85038	85537		X
85039	85538		X
	85539		X
85040	85540	X	
	85541	X	
85041	85540	X	
	85541	X	
85042	85540	X	
	85541	X	
85063	85562	X	
	85563	X	
	85572		X
85064	85563	X	
85065	85563	X	
85066	85564	X	
85067	85565		X
85073	85572		X
85074	85573		X
85080			
85081	85519	X	
	85520		X
85083	85579		X
	85581	X	
	85584	X	
85084	85583	X	
85085	85583	X	
	85582	X	
85086	85580	X	
	85582	X	
85087	85580	X	
85088	85584	X	
	85579		X
	85581	X	
85089	85584	X	
	85579		X
85091	85579		X
85092	85579		X

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-48.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Groundskeeping and/or Park Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85011	85508		X
85012	85508		X
	85509		X
	85510		X
85016	85513		X
85017	85514		X
85018	85514		X
85019	85532		X
	85514		X
	85531		X
85020	85516	X	
	85531		X
	85532		X
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520	X	
85023	85517	X	
	85518	X	
	85519	X	
	85520	X	
85024	85517	X	
	85518	X	
	85519	X	
	85520	X	
85025	85521	X	
	85522	X	
85026	85521	X	
	85522	X	
	85523	X	
85027	85524	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85028	85524	X	
	85525	X	
	85526	X	
85029	85524	X	
	85525	X	
	85526	X	
85030	85528	X	
85031	85527	X	
85032	85529		X
85033	85528	X	
	85530	X	
	85527	X	
	85534	X	
85034	85531		X
	85532		X
	85533		X
85035			
85040	85540		X
	85541		X
85041	85540		X
	85541		X
85042	85540		X
	85541		X
85043	85542	X	
	85543	X	
	85545	X	
85044	85544	X	
85045	85543	X	
	85546	X	
85046	85546	X	
85047	85547	X	
85048	85548	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85049	85549	X	
85050	85550	X	
85051	85551	X	
	85552	X	
85052	85553		X
85053	85554	X	
85054	85555	X	
85055	85555	X	
85056	85556	X	
	85557	X	
85057	85555	X	
85058	85558	X	
85059	85559	X	
85060	85560	X	
85061	85560	X	
	85561	X	
85062	85561	X	
85063	85562	X	
	85563	X	
	85572	X	
85064	85563	X	
85065	85563	X	
85066	85564	X	
85067	85565	X	
85068	85566	X	
85069	85567	X	
	85568	X	
85070	85569	X	
85071	85570	X	

85071	85571	X	
85073	85572	X	
85074	85573	X	
85075	85574	X	
85076	85575	X	
85077	85576	X	
85078	85577	X	
85079	85578	X	
85080			
85081	85519 85520	X X	
85082	85519 85520	X X	
85083	85579 85581 85584	 X	X X
85084	85583	X	
85085	85583	X	
85086	85580 85582	X X	
85087	85580	X	
85088	85584 85579 85581	X 	 X X
85089	85584 85579	X 	 X

85100	85591 85592 85593	X X X	
85101	85591	X	
85102	85592 85593 85594	X X X	
85103	85592	X	
85104	85593	X	
85105	85594	X	
85106	85596 85601	X X	
85107	85596 85601	X X	
85108	85597	X	
85109	85598 85599 85601	 X	X X
85110	85600	X	
85111	85601	X	

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table E-40.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Landscaping Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85009	86504		X
85011	85508		X
85012	85508		X
	85509		X
	85510		X
85013	85509		X
85014	85510		X
	85511		X
85015	85512		X
85016	85513	X	
85017	85514	X	
85018	85514	X	
85019	85532	X	
	85514	X	
	85531	X	
85020	85516	X	
	85531	X	
	85532	X	
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520	X	
85023	85517	X	
	85518	X	
	85519	X	
	85520	X	
85024	85517	X	
	85518	X	
	85519	X	
	85520	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85025	85515	X	
	85521	X	
	85522	X	
85026	85521	X	
	85522	X	
	85523	X	
85027	85524	X	
85028	85524	X	
	85525	X	
	85526		X
85029	85524	X	
	85525	X	
	85526		X
85030	85528	X	
85031	85527	X	
85032	85529	X	
85033	85528	X	
	85530	X	
	85527	X	
	85534	X	
85034	85531	X	
	85532	X	
	85533	X	
85035			
85040	85540		X
	85541		X
85041	85540		X
	85541		X
85042	85540		X
	85541		X
85043	85542	X	
	85543	X	
	85545	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85044	85544	X	
85045	85543	X	
	85546	X	
85046	85546	X	
85047	85547	X	
85048	85548	X	
85049	85549	X	
85050	85550	X	
85051	85551	X	
	85552	X	
85052	85553	X	
85053	85554	X	
85054	85555	X	
85055	85555	X	
85056	85556	X	
	85557	X	
85057	85555	X	
85058	85558	X	
85059	85559	X	
85060	85560	X	
85061	85560	X	
	85561	X	
85062	85561	X	
85063	85562	X	
	85563	X	
	85572	X	
85064	85563	X	

85065	85569	X	
85066	85566	X	
85067	85565		X
85068	85566	X	
85069	85567 85568	X X	
85070	85569	X	
85071	85570	X	
85072	85571		X
85073	85572	X	
85074	85573	X	
85075	85574	X	
85076	85575	X	
85077	85576	X	
85078	85577	X	
85079	85578	X	
85080			
85081	85519 85520	X X	
85082	85519 85520	X X	
85083	85579 85581 85584	 X X	X
85084	85583	X	
85085	85583	X	
85086	85580 85582	X	X
85087	85580	X	
85088	85584 85579 85581	X X	X
85089	85584 85579	X	X
85092	85579		X
85100	85591 85592 85593	X X X	
85101	85591	X	
85102	85592 85593 85591	X X X	
85103	85592	X	
85104	85593	X	
85105	85594	X	
85106	85595 85601	X X	
85107	85596 85601	X X	
85108	85597	X	
85109	85598 85599 85601	 X	X X
85110	85600		X
85111	85601	X	

[a]

[b] See Table S-7 for job skill descriptions.

[c] See Table S-8 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table E-30.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Nursery Production Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85007	85504		X
85009	85504		X
85010	85507		X
	85508	X	
85011	85508	X	
85012	85508	X	
	85509		X
	85510		X
85014	85510		X
	85511		X
85015	85512		X
85016	85513		X
85017	85514		X
85018	85514		X
85019	85532		X
	85514		X
	85531	X	
85520	85516		X
	85531	X	
	85532		X
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520		X
85023	85517	X	
	85518	X	
	85519	X	
	85520		X
85024	85517	X	
	85518	X	
	85519	X	
	85520		X
85025	85515	X	
	85521	X	
	85522	X	
85026	85521	X	
	85522	X	
	85523		X
85027	85524		X
85028	85524		X
	85525		X
	85526		X
85029	85524		X
	85525		X
	85526		X
85030	85528	X	
85031	85527		X
85032	85529		X
85033	85528	X	
	85527		X
	85530	X	
	85534	X	
85034	85531	X	
	85532		X
	85533		X
85035			
85039	85538		X
	85539		X
85040	85540		X
	85541		X
85041	85540		X
	85541		X
85042	85540		X
	85541		X
85043	85542	X	
	85543		X
	85545	X	
85044	85544	X	
85045	85543		X
	85546	X	
85046	85546	X	
85047	85547		X
85048	85548	X	
85049	85549	X	
85050	85550	X	
85051	85551		X
	85552		X
85053	85554		X
85054	85555		X
85055	85555		X
85056	85556		X
	85557		X
85058	85558		X
85059	85559		X
85060	85560	X	
85061	85560	X	
	85561		X
85062	85561		X
85063	85562		X
	85563	X	
	85572	X	
85064	85563	X	

85065	85563	X	
85066	85564		X
85067	85565		X
85068	85566		X
85069	85567 85568	X	X
85070	85569	X	
85071	85570	X	
85072	85571		X
85073	85572	X	
85074	85573		X
85075	85574		X
85076	85575		X
85077	85576		X
85078	85577		X
85079	85578		X
85080			
85081	85519 85520	X	X
85082	85519 85520	X	X
85083	85579 85581 85584	X X	X
85084	85583	X	
85085	85583	X	
85086	85580 85582	X	X
85087	85580	X	
85088	85584 85579 85581	X X	X
85089	85584 85579	X	X
85092	85579		X
85105	85594		X
85106	85595 85601		X X
85107	85596 85501		X X
85108	85597		X

[a]See Table S-7 for job skill descriptions.

[b]See Table S-8 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table 5-81.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into the Turf and Sprinkler Industry.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85007	85504		X
85008	85504		X
	85503		X
85009	85504		X
85010	85507		X
	85508	X	
85011	85508	X	
85012	85508	X	
	85509		X
	85510	X	
85013	85509		X
85014	85510	X	
	85511	X	
85015	85512	X	
85016	85513	X	
85017	85514	X	
85018	85514	X	
85019	85532	X	
	85514	X	
	85531	X	
85020	85516	X	
	85531	X	
	85532	X	
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85023	85517	X	
	85518	X	
	85519	X	
	85520	X	
85024	85517	X	
	85518	X	
	85519	X	
	85520	X	
85025	85515	X	
	85521	X	
	85522	X	
85026	85521	X	
	85522	X	
	85523	X	
85027	85524	X	
85028	85524	X	
	85525	X	
	85526	X	
85029	85524	X	
	85525	X	
	85526	X	
85030	85528	X	
85031	85527	X	
85032	85529		
85033	85528	X	
	85530	X	
	85527	X	
	85534	X	
85034	85531	X	
	85532	X	
	85533	X	
85035			
85040	85540		X
	85541	X	
85041	85540		X
	85541	X	

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85042	85540		X
	85541	X	
85043	85542	X	
	85543	X	
	85545	X	
85044	85544	X	
85045	85543	X	
	85546	X	
85046	85546	X	
85047	85547	X	
85048	85548	X	
85049	85549	X	
85050	85550	X	
85051	85551	X	
	85552	X	
85052	85553	X	
85053	85554	X	
85054	85555	X	
85055	85555	X	
85056	85556	X	
	85557	X	
85057	85555	X	
85058	85558	X	
85059	85559	X	
85060	85560	X	
85061	85560	X	
	85561	X	

85062	85561	X	
85063	85562	X	
	85563	X	
	85572	X	
85064	85563	X	
85065	85563	X	
85066	85564	X	
85067	85565	X	
85068	85566	X	
85069	85567	X	
	85568	X	
85070	85569	X	
85071	85570	X	
85072	85571	X	
85073	85572	X	
85074	85573	X	
85075	85574	X	
85076	85575	X	
85077	85576	X	
85078	85577	X	
85079	85578	X	
85080			
85081	85519	X	
	85520	X	
85082	85519	X	
	85520	X	
85083	85579		X
	85581	X	
	85584	X	
85084	85583	X	
85085	85583	X	
85086	85580	X	
	85582	X	
85087	85580	X	
85088	85584	X	
	85579		X
	85581	X	
85089	85584	X	
	85579		X
85092	85579		X
85094	85586	X	
	85587	X	
	85588	X	
85095	85587	X	
	85588	X	
85096	85589		X
85097	85586	X	
	85587	X	
	85588	X	
	85589		X
	85590	X	
85099	85586	X	
	85587	X	
	85588	X	
85100	85591	X	
	85592	X	
	85593	X	
85101	85591	X	
85102	85592	X	
	85593	X	
	85594	X	
85103	85592	X	
85104	85593	X	
85105	85594	X	
85106	85595	X	
	85601	X	
85107	85596	X	
	85601	X	
85108	85597	X	
85109	85598		X
	85599		X
	85601	X	
85110	85600	X	
85111	85601	X	

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-52.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Farm Implement Repair.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501	X	
	85502		
85002	85501	X	
	85502	X	
	85503	X	
85003	85502	X	
	85626		X
	85627		X
85004	85502	X	
	85504		X
85005	85505	X	
85006	85506	X	
85007	75506	X	
85008	85507	X	
85009	85508	X	
	85509	X	
	85510	X	
85010	85510	X	
85011	85511	X	
85012	85512	X	
85013	85513		X
85014	85514		X
85015	85515		X
85016	85516		X
	85517		X
85017	85511	X	
85018	85516		X
	85517		X
85019	85516		X
85020	85518		X
	85519	X	
85021	85515		X
	85517		X
	85512	X	
85023	85516		X
85024	85524		X
85025	85524		X
	85525		X
	85526		X
85026	85526		X
	85523		X
	85521		X
85027	85519	X	
	85520	X	
85028	85522	X	
85029	85523		X
	85526		X
85030	85523		X
	85526		X
85031	85524		X
	85526		X
85032	85526		X
85033	85526		X
85034			
85035	85526		X
85036	85526		X
85038			
85040	85525		X
85041	85524		X
	85526		X
85042			
85043	85523		X
85044	85514		X
85045	85515		X
85046	85515		X
85047	85571	X	
	85572	X	
85048	85539		X
	85543		X
	85570	X	
85049	85546		X
	85570	X	
85050	85527		X
	85529	X	
	85534	X	
85051	85530	X	
	85532	X	
85052	85531	X	
	85535	X	
	85538	X	
85053	85527		X
85054	85530	X	
	85533	X	
85055	85528	X	

85056	85527 85532	 X	X
85057	85532 85533 85537	X 	 X X
85058	85543 85549 85559 85566 85567 85568 85569	 X X X	X X X X
85059	85540 85541 85542 85543 85544	 	X X X X X
85060	85545 85561	 	X X
85061	85534	X	
85062	85538 85541 85547	 	X X X
85063	85540		X
85064	85565 85536	 	X X
85065	85544 85550 85565	 	X X X
85066	85542 85550	 	X X
85067	85563		X
85068	85551 85560 85562	 	X X X
85069	85548 85553	 	X X
85070			
85071	85550 85563	 	X X

85072	85564		X
85073	85548 85546	 	X X
85074	85546 85571 85557	 X 	X X
85075			
85076	85546 85557 85564	 	X X X
85078	85548		X
85079	85553		X
85080	85553		X
85081	85564 85565	 X	X
85082	85563		X
85083	85564		X
85084			
85085	85550 85563	 	X X
85086	85547		X
85087	85546		X
85088	85546		X
85089			
85090			
85091	85565	X	
85092			
85093			
85094			
85095	85544		X
85096	85554		X

85097	85554		X
85099	85556 85558	 	X X
85100			
85101	85555		X
85102			
85103			
85104			
85105	85546		X
85106	85546		X
85107			
85108			
85109	85548		X
85110	85557		X
85111	85559		X
85112	85558		X
85113			
85114	85546 85563	 	X X
85115	85546		X
85116			
85117			
85118	85565	X	
85119			
85120			
85121	85566	X	
85122	85549		X
85123			
85124	85574 85575	X X	

Table 5-52.--Continued.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85125			
85126	85573	X	
	85581	X	
	85578		X
85127	85573	X	
85128	85574	X	
	85579		X
85129	85574	X	
	85577	X	
85130			
85131	85574	X	
	85577	X	
85132	85576	X	
85134	85574	X	
	85580		X
85135			
85136			
85137			
85138	85587		X
85139	85587		X
85140	85584	X	
	85589		X
85141	85588	X	
85142	85588	X	
85143	85583	X	
85144	85583	X	
85145	85590		X

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85146	85582	X	
85147	85583	X	
85148	85595	X	
	85590		X
85149	85585	X	
85150	85594	X	
	85593	X	
	85592	X	
	85591		X
85151	85596	X	
	85597	X	
	85599	X	
	85600	X	
	85601	X	
85152	85596	X	
	85504		X
85153	85599	X	
85154	85596	X	
85155	85597	X	
85156	85598	X	
85157			
85158	85602	X	
	85603	X	
85159	85604	X	
85160	85605		X
85161	85606		X
	85599	X	
85162	85605		X

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85163	85606		X
85164	85607	X	
	85608		X
	85585	X	
85165			
85166	85539		X
85167	85613		X
	85582	X	
85168	85506	X	
	85629	X	
	85628		X
85169	85621	X	
	85505	X	
85170	85621	X	
85171	85608		X
	85619		X
	85609	X	
	85610		X
85172	85608		X
	85611		X
85173	85584	X	
	85586		X
85174	85592	X	
	85590		X
	85613		X
	85621	X	
85175	85586		X
	85613		X
	85621	X	
85176	85621	X	
	85625	X	
	85594	X	

85177			
85178	85614 85615 85620 85592 85589	 X X 	X X X
85179	85695	X	
85180	85595 85590	X 	 X
85181	85608 85609 85610	 X 	X X
85182	85592 85624	X X	
85183	85614		X
85184	85621 85623	X 	 X
85185	85617 85618	X X	
85186	85622	X	
85187	85616		X
85188	85620 85621	X X	
85189			
85190	85616 85618	 X	X
85191	85623		X
85192	85616		X
85193	85608		X
85194	85624	X	
85195	85616 85621	 X	X
85196	85616 85617	 X	X
85197	85626 85627	 	X X
85198			
85199	85505	X	
85200			
85201	85621	X	
85202	85506	X	
85203	85506	X	
85204			
85205	85608		X
85207	85631		X
85208	85636		X
85209	85632	X	
85211	85632 85633	X 	 X
85212	85634	X	
85213	85634	X	
85214	85636		X
85215	85638		X
85216	85638		X
85217	85638		X
85218	85638		X
85219	85638		X
85220	85639 85642 85643	 	X X X
85221	85640		X
85223	85647 85648	X X	
85224	85649	X	
85225			
85226			
85227			
85228	85603 85602	X X	
85229	85603 85602	X X	
85230	85601	X	
85231	85601	X	
85232	85650		X
85233	85651		X
85234	85652		X
85235	85653	X	
85236	85653	X	
85237	85654 85655	 	X X
85238	85656		X
85239	85657 85660	 	X X
85240	85658		X
85241	85659		X
85242	85661 85662	X X	
85243	85662	X	
85244	85663		X
85245	85664		X
85246	85665	X	
85247	85664		X

[a]See Table S-9 for job skill descriptions.

[b]See Table S-10 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-53.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Agricultural Chemical Biological-Technical Services[1]

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502		X
85002	85503		X
	85504		X
85003	85508		X
	85509		X
	85510		X
85009	85523		X
	85506		X
	85507		X
	85524		X
85014	85536		X
	85537		X
	85538		X
85034	85594		X
	85590		X
	85591		X
85035	85592		X
	85593		X
85036	85592		X
	85593		X
85052	85619		X
	85620		X
	85621		X
85053	85622		X
	85623		X
85081	85661		X
	85662		X
85082	85663		X
	85670		X
	85664		X
85091	85672		X
85092	85673		X
85093	85674		X
	85675		X
	85676		X
85094	85681		X
85095	85676		X
	85677		X
85096	85677		X
85097	85677		X
85098	85676		X
85099	85677		X
85100	85678		X
85101	85678		X
85103	85682	X	
85105	85684		X
85106	85685	X	
85108	85684		X
85111	85688		X
85112	85689		X
85118	85696	X	
85119	85696	X	
85120	85701	X	
85121	85697	X	
85123	85700		X
85124	85700		X
85125	85701	X	
85126	85699		X
85127			
85128	85701	X	
85132	85705		X
85136	85708		X
85137	85709		X
	85710		X
85138	85715	X	
85139	85711		X
	85712		X
85140	85713		X
85141	85714	X	
85143	85717	X	
	85715	X	
85144	85716	X	
	85715	X	
85145	85716	X	
	85717	X	
	85719	X	
85146	85716	X	
	85717	X	
	85719	X	
85152	85722		X
	85723		X
	85724		X
85155	85726		X
85159	85726		X
85160	85727		X
85163	85730	X	

85164	85731	X	
85166	85733	X	
85167	85732	X	
85168	85733	X	
85170	85735	X	
85172	85732	X	
85173	85733	X	
85175	85735	X	

85176	85735	X	
85177	85736 85737		X X
85178	85737		X
85179	85738		X
85180	85738		X
85181	85739		X
85182	85740 85741	X X	

85183	85742		X
85191	85751		X
85192	85752	X	
85193	85753		X
85194	85754		X
85195	85755		X
85196	85756		X

[a] See Table S-11 for job skills descriptions.

[b] See Table S-12 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-51.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Animal Laboratory Biological-Technical Services.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501	X	
	85502	X	
85002	85503	X	
	85504		X
85003	85508		X
	85509		X
	85510		X
85004	85505	X	
	85511	X	
	85512	X	
85005	85513	X	
	85514		X
	85515		X
85008	85520	X	
	85521		X
	85522		X
85009	85523	X	
	85506		X
	85507		X
	85524		X
85010	85525	X	
85014	85536	X	
	85537	X	
	85538		X
85015	85539		X
	85540	X	
85016	85539		X
	85540	X	
	85541		X
	85542		X
	85543	X	
	85544		X
85017	85544		X
	85545	X	
	85546		X
85018	85546		X
	85547		X
85022	85555		X
	85557		X
	85558		X
85023	85559	X	
	85560	X	
85024	85561		X
85025	85562		X
	85563		X
	85564		X
	85565		X
85029	85576		X
	85577	X	
	85578	X	
	85579	X	
	85580		X
85030	85581		X
	85582	X	
85036	85592	X	
	85593	X	
85039	85599		X
	85598	X	
	85593	X	
85040	85596	X	
	85597	X	
85045	85606		X
	85607		X
	85608		X
85048	85614	X	
85049	85614	X	
	85611		X

[a] See Table S-11 for job skill descriptions.

[b] See Table S-12 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-55.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Food Processing Biological-Technical Services.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85003	85508		X
	85509		X
	85510		X
85081	85661		X
	85662		X
85082	85663		X
	85664		X
	85670		X
85106	85685		X
85108	85684		X
85111	85688		X
85112	85689		X
85118	85696		X
85120	85701		X
85123	85700		X
85125	85701		X
85126	85699		X
85128	85701		X
85163	85730		X

[a]See Table S-11 for job skill descriptions.

[b]See Table S-12 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-56.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Grain, Feed, and/or Seed Biological-Technical Services.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85001	85501		X
	85502		X
85002	85503		X
	85504		X
85003	85508	X	
	85509		X
	85510		X
85004	85505	X	
	85511		X
	85512		X
85008	85520		X
	85521		X
	85522		X
85009	85523		X
	85506	X	
	85507		X
	85524		X
85010	85525	X	
85011	85526		X
	85527		X
	85528	X	
85012	85529		X
	85530		X
	85531	X	
	85532	X	
85013	85533		X
	85534		X
	85535		X
85014	85536		X
	85537	X	
	85538		X
85015	85539		X
	85540		X
85016	85539		X
	85540		X
	85541		X
	85542		X
	85543		X
	85544		X
85017	85544		X
	85545		X
	85546		X
85018	85546		X
	85547		X
85019	85548	X	
	85549	X	
	85550	X	
85020	85551		X
	85552		X
85021	85553		X
	85554		X
	85555		X
	85556		X
85022	85555		X
	85557		X
	85558		X
85023	85559		X
	85560		X
85024	85561	X	
85025	85564		X
	85562	X	
	85563		X
	85565		X
85029	85576		X
	85577		X
	85578		X
	85579		X
	85580	X	
85030	85581	X	
	85582	X	
85031	85583		X
	85584		X
	85585		X
	85586		X
85032	85587		X
	85588		X
	85589		X
85033	85587		X
	85588		X
	85589		X
85034	85594		X
	85590		X
	85591		X
85035	85592		X
	85593		X
85036	85592		X
	85593		X
85037	85592		X
	85593		X
85039	85599		X
	85598		X
	85593		X
85045	85606		X
	85607		X
	85608		X
85047	85610		X
	85611		X
	85612		X
	85613		X
85048	85614		X

85049	85611 85614		X X
85050	85615 85616	X	X
85051	85617 85618		X X
85052	85619 85620 85621	X	X X
85053	85622 85623		X X
85058	85623 85621		X X
85059	85632 85633		X X
85060	85634		X
85061	85635		X
85062	85636		X
85063	85637		X
85064	85638 85639		X X
85065	85640 85641		X X
85067	85642		X
85068	85643 85644 85645		X X X
85069	85644 85645		X X
85070	85646 85647		X X
85071	85648		X
85072	85649		X
85073	85650		X
85075	85653 85654		X X

85080	85660		X
85090	85671	X	
85091	85672	X	
85092	85673	X	
85093	85674 85675 85676	X X X	
85094	85681	X	
85095	85676 85677	X X	
85096	85677	X	
85097	85677	X	
85098	85676	X	
85099	85677	X	
85100	85678	X	
85101	85678	X	
85102	85679 85680	X	X
85103	85682	X	
85104	85683		X
85105	85684	X	
85106	85685		X
85109	85685		X
85110	85687		X
85111	85688		X
85112	85689		X
85113	85690		X
85114	85691 85692		X X
85115	85693 85694		X X

85116	85694 85695 85696		X X X
85117	85692		X
85118	85696		X
85120	85701		X
85133	85706	X	
85134	85707	X	
85135	85707	X	
85136	85708	X	
85137	85709 85710		X X
85138	85715	X	
85139	85711 85712		X X
85140	85713		X
85141	85714	X	
85142	85715	X	
85143	85717 85715	X X	
85144	85716 85715	X X	
85145	85716 85717 85719	X X X	
85146	85716 85717 85719	X X X	
85149	85722 85723 85724	X	X X
85150	85722 85723 85724	X	X X
85151	85722 85723 85724	X	X X

147

E

Table S-56.--Continued.

Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85152	85722	X		85163	85730		X	85178	85737		X
	85723		X	85164	85731		X	85182	85740		X
	85724		X						85741	X	
85153	85722	X		85166	85733		X	85193	85753		X
	85723		X	85167	85732		X	85194	85754		X
	85724		X								
85154	85725		X	85168	85733		X	85195	85755		X
85155	85726		X	85172	85732		X	85196	85756		X
85156				85175	85735		X				

[a]See Table S-11 for job skill descriptions.

[b]See Table S-12 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-57.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Waste Disposal Biological-Technical Services.

Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]
85081	85661	X	
	85662	X	
85082	85663		X
	85664	X	
	85670		X
85083	85665	X	
	85666		X
85085	85665	X	
	85669		X
85086	85666		X
85087	85667	X	
	85668	X	
85088	85669		X
85089	85661	X	
85170	85735		X
85176	85735		X

[a] See Table S-11 for job skill descriptions.

[b] See Table S-12 for job knowledge descriptions.

[c] Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-58.--Disposition of Job Knowledges Associated with Accepted Job Skills for Entry into Water Resources Biological-Technical Services.

Accepted Job Skill	Associated Job Knowledges			Accepted Job Skill	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85003	85508		X	85170	85735	X	
	85509		X				
	85510		X	85171	85736	X	
85081	85661	X		85172	85732	X	
	85662	X					
85082	85663		X	85173	85733	X	
	85664	X		85176	85735	X	
	85670	X					
85083	85665	X		85177	85736	X	
	85666		X		85737	X	
85085	85665	X		85178	85737	X	
	85669	X		85179	85738		X
85087	85667	X		85180	85738		X
	85668	X					
85088	85669	X		85181	85739	X	
85089	85661	X		85195	85755		X
85125	85701	X		85196	85756		X
85126	85699		X				
85132	85705		X				
85160	85727	X					
85163	85730	X					

[a]See Table S-11 for job skill descriptions.

[b]See Table S-12 for job knowledge descriptions.

[c]Because of their close association with accepted job skills, it is recommended that job knowledges marked "review" be accepted as needed for job entry.

Table S-59.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Dairy Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85502	85001	X	
85505	85003	X	
	85005	X	
85507	85005	X	
85508	85007	X	
85511	85008	X	
85516	85010	X	
85517	85010	X	
85522	85013	X	
35524	85014	X	
85525	85014	X	
85526	85014	X	
85527	85018	X	
85528	85015	X	
85529	85015	X	
85530	85015	X	
85531	85016	X	
85532	85017	X	
85533	85017	X	
85534	85017	X	
85535	85017	X	
85536	85018	X	
85537	85019	X	
85538	85019	X	

Accepted Job Knowledge	Associated Job Skill		
Code No.[a]	Code No.[b]	Accept	Review[c]
85539	85020	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85548	85026	X	
85549	85026	X	
85550	85026	X	
85552	85027	X	
85553	85027	X	
85554	85027	X	
85555	85027	X	
85556	85027	X	
	85029	X	
85557	85028	X	
85559	85030	X	
	85032	X	
85561	85033	X	
	85032	X	
85562	85034	X	
85563	85035	X	
85564	85036	X	
85565	85036	X	
85566	85029	X	
	85036	X	
85572	85043	X	
85574	85045	X	

Accepted Job Knowledge	Associated Job Skill		
Code No.[a]	Code No.[b]	Accept	Review[c]
85576	85043	X	
	85046	X	
	85047	X	
85577	85047	X	
85578	85047	X	
	85048	X	
85579	85048	X	
85580	85048	X	
85583	85049	X	
85584	85050	X	
85585	85050	X	
85586	85050	X	
85587	85051	X	
85588	85052	X	
85589	85053	X	
	85054	X	
	85055	X	
85590	85056	X	
85599	85062	X	
85601	85064	X	
	85065	X	
85604	85066	X	
85606	85068	X	
85608	85067	X	
	85069	X	
85617	85077	X	
	85078	X	

85620	85082 85083	X X	
85621	85083	X	
85622	85084	X	
85627	85089	X	
85628	85089	X	
85638	85098	X	
85640	85102	X	
85641	85102	X	
85642	85103	X	
85643	85104	X	
85644	85104 85105	X X	
85645	85106	X	
85646	85106 85107 85108	X X X	
85647	85110 85111	X X	
85648	85112	X	
85649	85113	X	
85650	85114	X	
85651	85114	X	
85652	85115	X	
85653	85116	X	
85655	85118	X	
85657	85120	X	

[a] See Table S-6 for job knowledge descriptions.
[b] See Table S-5 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

155

Table S-60.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Bush and/or Vine Fruit Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85502	85001	X	
85503	85002	X	
85504	85002	X	
	85004	X	
85505	85003	X	
	85005	X	
85506	85005	X	
	85006	X	
85509	85007	X	
85510	85007	X	
85512	85008	X	
85513	85008	X	
	85009	X	
85514	85008	X	
85515	85008	X	
85516	85010	X	
85517	85010	X	
85518	85011	X	
85519	85012	X	
85520	85012	X	
85522	85013	X	
85524	85014	X	
85525	85014	X	
85526	85014	X	
85527	85018	X	
85528	85015	X	
85531	85016	X	
85532	85017	X	
85533	85017	X	
85534	85017	X	
85535	85017	X	
85536	85018	X	
85537	85019	X	
85538	85019	X	
85539	85020	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85543	85021	X	
	85023	X	
85544	85024	X	
85545	85024	X	
85547	85015	X	
	85025	X	
85552	85027	X	
85553	85027	X	
85560	85033	X	
	85032	X	
85561	85032	X	
	85033	X	
85562	85034	X	
85563	85035	X	
85566	85029	X	
	85036	X	
85567	85036	X	
85571	85040		X
	85041	X	
	85042		X
85601	85064	X	
	85065	X	
85608	85067	X	
	85069	X	
85620	85082	X	
	85083	X	
85621	85083	X	
85622	85084	X	
85625	85087	X	
85626	85088	X	
85627	85089	X	
85628	85089	X	
85629	85090	X	
85630	85091	X	
85631	85092	X	
85632	85093	X	
	85094	X	
85633	85094	X	

85634	85095	X		85643	85104	X		85651	85114	X	
85635	85096	X		85644	85104 85105	X X		85652	85115	X	
85636	85096	X		85645	85106	X		85653	85116	X	
85637	85097	X		85646	85106 85107 85108	X X X		85654	85117	X	
85638	85098	X						85657	85120	X	
85639	85099 85100 85101	X X X		85647	85110 85111	X X		85658	85121	X	
85640	85102	X		85648	85112	X					
85641	85102	X		85649	85113	X					
85642	85103	X		85650	85114	X					

[a] See Table S-6 for job knowledge descriptions.

[b] See Table S-5 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

157

284

283

F

Table S-61.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Tree Fruit Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85501	85001	X	
	85002	X	
85502	85001	X	
85503	85002	X	
85504	85002	X	
	85004	X	
85505	85003	X	
	85005	X	
85506	85005	X	
	85006	X	
85507	85005	X	
85508	85007	X	
85509	85007	X	
85510	85007	X	
85511	85008	X	
85514	85008	X	
85515	85008	X	
85516	85010	X	
85517	85010	X	
85518	85011	X	
85519	85012	X	
85520	85012	X	
85522	85013	X	
85523	85013	X	
85524	85014	X	
85525	85014	X	
85526	85014	X	
85527	85018	X	
85528	85015	X	
85529	85015	X	
85530	85015	X	
85531	85016	X	
85532	85017	X	
85533	85017	X	
85534	85017	X	
85535	85017	X	
85536	85018	X	
85537	85019	X	
85538	85019	X	
85539	85020	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85542	85022	X	
	85020	X	
85543	85021	X	
	85023	X	
85544	85024	X	
85545	85024	X	
85547	85015	X	
	85025	X	
85548	85026	X	
85549	85026	X	
85550	85026	X	
85551	85026	X	
85552	85027	X	
85553	85027	X	
85554	85027	X	
85555	85027	X	
85556	85029	X	
	85027	X	
85557	85028	X	
85559	85030	X	
	85031	X	
85560	85032	X	
	85033	X	
85561	85032	X	
	85033	X	
85562	85034	X	
85564	85036	X	
85565	85036	X	
85566	85029	X	
	85036	X	
85567	85036	X	
85572	85043	X	

85576	85046	X	
	85043	X	
	85047	X	
85577	85047	X	
85578	85047	X	
	85048	X	
85579	85048	X	
85580	85048	X	
85590	85056	X	
85596	85061	X	
85599	85062	X	
85601	85064	X	
	85065	X	
85602	85066	X	
85603	85070	X	
	85068	X	
85604	85066	X	
85605	85067	X	
85606	85068	X	
85607	85067	X	
85608	85067	X	
	85069	X	
85612	85070	X	
85613	85075	X	
85614	85073	X	
85615	85076	X	
	85074	X	
85616	85077	X	
85617	85077	X	
	85078	X	

85620	85082	X	
	85083	X	
85621	85083	X	
85622	85084	X	
85623	85085	X	
85624	85086	X	
85625	85087	X	
85626	85088	X	
85627	85089	X	
85628	85089	X	
85629	85090	X	
85630	85091	X	
85631	85092	X	
85632	85093	X	
	85094	X	
85633	85094	X	
85634	85095	X	
85635	85096	X	
85638	85098	X	
85640	85102	X	
85641	85102	X	
85642	85103	X	
85643	85104	X	
85644	85104	X	
	85105	X	
85645	85106	X	
85646	85106	X	
	85107	X	
	85108	X	

85647	85110	X	
	85111	X	
85648	85112	X	
85649	85113	X	
85650	85114	X	
85651	85114	X	
85652	85115	X	
85653	85116	X	
85654	85117	X	
85655	85118	X	
85656	85119	X	
85657	85120	X	

[a] See Table S-6 for job knowledge descriptions.

[b] See Table S-5 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-62.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Grain and/or Bean Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85502	85001	X	
85503	85002	X	
85504	85002	X	
	85004	X	
85505	85003	X	
	85005	X	
85506	85005	X	
	85006	X	
85510	85007	X	
85516	85010	X	
85517	85010	X	
85518	85011	X	
85522	85013	X	
85524	85014	X	
85525	85014	X	
85526	85014	X	
85527	85018	X	
85528	85015	X	
85530	85015	X	
85531	85016	X	
85532	85017	X	
85533	85017	X	
85534	85017	X	
85535	85017	X	
85536	85018	X	
85537	85019	X	
85538	85019	X	
85539	85020	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85549	85026	X	
85552	85027	X	
85553	85027	X	
85554	85027	X	
85555	85027	X	
85556	85027	X	
	85029	X	
85561	85032	X	
	85033	X	
85562	85034	X	
85563	85035	X	
85564	85036	X	
85565	85036	X	
85566	85029	X	
	85036	X	
85577	85047	X	
85578	85047	X	
	85048	X	
85579	85048	X	
85581	85049	X	
85583	85049	X	
85584	85050	X	
85589	85053	X	
	85054	X	
	85055	X	
85596	85061	X	
85599	85062	X	
85608	85067	X	
	85069	X	
85620	85082	X	
	85083	X	
85621	85083	X	
85622	85084	X	
85625	85087	X	
85626	85088	X	
85628	85089	X	
85633	85094	X	
85634	85095	X	
85635	85096	X	
85638	85098	X	
85640	85102	X	
85641	85102	X	

85642	85103	X		85647	85110	X		85657	85120	X	
					85111	X					
85643	85104	X		85648	85112	X					
85644	85104	X		85650	85114	X					
	85105	X									
85645	85106	X		85651	85114	X					
85646	85106	X		85652	85115	X					
	85107	X									
	85108	X		85653	85116	X					

[a]See Table S-6 for job skill descriptions.

[b]See Table S-5 for job knowledge descriptions.

[c]It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-63.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Livestock (Beef, Swine, Sheep) Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85502	85001	X	
85504	85002	X	
	85004	X	
85505	85003	X	
	85005	X	
85506	85005	X	
	85006	X	
85508	85007	X	
85510	85007	X	
85511	85008	X	
85512	85008	X	
85513	85008	X	
	85009	X	
85516	85010	X	
85517	85010	X	
85518	85011	X	
85522	85013	X	
85524	85014	X	
85525	85014		
85526	85014	X	
85527	85018	X	
85528	85015	X	
85529	85015	X	
85530	85015	X	
85531	85016	X	

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85532	85017	X	
85533	85017	X	
85534	85017	X	
85535	85017	X	
85536	85018	X	
85537	85019	X	
85538	85019	X	
85539	85020	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85542	85020	X	
	85022	X	
85543	85021	X	
	85023	X	
85548	85026	X	
85549	85026	X	
85550	85026	X	
85551	85026	X	
85552	85027	X	
85553	85027	X	
85554	85027	X	
85555	85027	X	
85556	85027	X	
	85029	X	

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85557	85028	X	
85559	85030	X	
	85031	X	
85561	85032	X	
	85033	X	
85562	85034	X	
85563	85035	X	
85564	85036	X	
85565	85036	X	
85566	85029	X	
	85036	X	
85567	85036	X	
85570	85038	X	
	85039	X	
85572	85043	X	
85576	85043	X	
	85046	X	
	85047	X	
85577	85047	X	
85578	85047	X	
	85048	X	
85579	85048	X	
85580	85048	X	
85581	85049	X	
85582	85049	X	
85583	85049	X	
85584	85050	X	

85585	85050	X	
85587	85051	X	
85588	85052	X	
85589	85053 85054 85055	X X X	
85590	85056	X	
85594	85060	X	
85596	85061	X	
85599	85062	X	
85603	85068 85070	X X	
85604	85066	X	
85608	85067 85069	X X	
85620	85082 85083	X X	
85622	85084	X	
85625	85087	X	
85626	85088	X	
85628	85089	X	
85634	85095	X	
85635	85096	X	
85638	85098	X	
85640	85102	X	
85641	85102	X	
85642	85103	X	
85644	85104 85105	X X	
85645	85106	X	
85646	85106 85107 85108	X X X	
85647	85110 85111	X X	
85648	85112	X	
85650	85114	X	
85651	85114	X	
85652	85115	X	
85653	85115	X	
85654	85117	X	
85657	85120	X	
85658	85121	X	

[a] See Table S-6 for job knowledge descriptions.

[b] See Table S-5 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-64.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Poultry Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85502	85001	X	
85503	85002	X	
85504	85002	X	
	85004	X	
85505	85003	X	
	85005	X	
85506	85005	X	
	85006	X	
85508	85007	X	
85511	85008	X	
85512	85008	X	
85513	85008	X	
	85009	X	
85516	85010	X	
85517	85010	X	
85518	85011	X	
85519	85012	X	
85522	85013	X	
85524	85014	X	
85526	85014	X	
85528	85015	X	
85531	85016	X	
85532	85017	X	
85533	85017	X	
85534	85017	X	
85535	85017	X	
85536	85018	X	
85538	85019	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85542	85020	X	
	85022	X	
85546	85025	X	
85547	85015	X	
	85025	X	
85548	85026	X	
85549	85026	X	
85551	85026	X	
85552	85027	X	
85553	85027	X	
85554	85027	X	
85555	85027	X	
85556	85027	X	
	85029	X	
85561	85032	X	
	85033	X	
85563	85035	X	
85564	85036	X	
85565	85036	X	
85566	85029	X	
	85036	X	
85567	85036	X	
85569	85038		X
	85039	X	
85570	85038		X
	85039	X	
85571	85040	X	
	85041	X	
	85042	X	
85582	85049	X	
85583	85049	X	
85584	85050	X	
85596	85061		X
85599	85062	X	
85611	85070	X	
85620	85082	X	
	85083	X	
85624	85086	X	
85625	85087	X	
85626	85088	X	
85628	85089	X	
85629	85090	X	
85636	85096	X	
85638	85098	X	

85639	85099	X	
	85100	X	
	85101	X	
85640	85102	X	
85641	85102	X	
85642	85103	X	
85643	85104	X	
85644	85104	X	
	85105	X	
85645	85106	X	
85647	85110	X	
	85111	X	
85648	85112	X	
85649	85113	X	
85650	85114	X	
85651	85114	X	
85652	85115	X	
85653	85116	X	
85654	85117		X
85656	85119	X	
85657	85120	X	
85658	85121	X	

[a] See Table S-6 for job knowledge descriptions.

[b] See Table S-5 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-65.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Vegetable, Beet, and/or Potato Farming.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85503	85002	X	
85504	85002	X	
	85004	X	
85517	85010	X	
85518	85011	X	
85522	85013	X	
85524	85014	X	
85528	85015	X	
85529	85015	X	
85530	85015	X	
85531	85016	X	
85532	85017	X	
85533	85017	X	
85534	85017	X	
85536	85018	X	
85537	85019	X	
85538	85019	X	
85539	85020	X	
85540	85020	X	
	85021	X	
85541	85020	X	
	85021	X	
85548	85026	X	
85549	85026	X	
85561	85033	X	
	85032	X	
85562	85034	X	
85563	85035	X	
85564	85036	X	
85565	85036	X	
85566	85029	X	
	85036	X	
85599	85062	X	
85619	85081	X	
85620	85082	X	
	85083	X	
85621	85083	X	
85622	85084	X	
85623	85085	X	
85624	85086	X	
85625	85087	X	
85626	85088	X	
85627	85089	X	
85628	85089	X	
85629	85090	X	
85633	85094	X	
85634	85095	X	
85635	85096	X	
85638	85098	X	
85639	85099	X	
	85100	X	
	85101	X	
85640	85102	X	
85641	85102	X	
85642	85103	X	
85643	85104	X	
85644	85104	X	
	85105	X	
85645	85106	X	
85646	85106	X	
	85107	X	
	85108	X	
85647	85110	X	
	85111	X	
85648	85112	X	
85649	85113	X	
85650	85114	X	
85651	85114	X	
85652	85115	X	
85653	85116	X	

85655	85118	X	
85657	85120	X	
85658	85121	X	

[a] See Table S-6 for job knowledge descriptions.

[b] See Table S-5 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-66.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Arboriculture Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85513	85016	X	
85515	85025	X	
85516	85020	X	
95517	85021	X	
	85022	X	
	85023	X	
	85024	X	
85518	85021	X	
	85022	X	
	85023	X	
	85024	X	
85519	85021	X	
	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85520	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85521	85025	X	
	85026	X	
85523	85026	X	
85524	85027	X	
	85028	X	
	85029	X	
85525	85028	X	
	85029	X	
85526	85028	X	
	85029	X	
85527	85031	X	
	85033	X	
85528	85030	X	
	85033	X	
85530	85033	X	
85534	85033	X	
85542	85043	X	
85543			
85544	85044	X	
85547	85047	X	
85548	85048	X	
85550	85050	X	
85556	85056	X	
85557	85056	X	
85558	85058	X	
85559	85059	X	
85561	85061		X
	85062	X	
85562	85063	X	
85563	85063	X	
	85064	X	
	85065	X	
85564	85066	X	
85566	85068	X	
85567	85069	X	
85568	85069	X	
85572	85063	X	
	85073	X	
85573	85075	X	
85574	85075	X	
85575	85076	X	
85576	85077		X
85577	85078	X	
85578	85079	X	
85582	85086	X	
85591	85100	X	
	85101	X	
85594	85102	X	
	85105	X	
85595	85106	X	
85596	85107	X	
85597	85108	X	
85601	85106	X	
	85107	X	
	85111	X	
	85109	X	

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-67.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Bedding Plant Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85517	85021		X
	85022		X
	85023		X
	85024		X
85518	85021		X
	85022		X
	85023		X
	85024		X
85519	85021		X
	85081	X	
	85022		X
	85082	X	
	85023		X
	85024		X
85521	85025		X
	85026		X
85522	85025		X
	85026		X
85523	85026		X
85527	85031	X	
	85033	X	
85528	85030	X	
	85033	X	
85542	85043	X	
85543	85043	X	
	85045		X
85544	85044	X	
85545	85043	X	
85546	85045		X
	85046		X
85548	85048		X
85549	85049		X
85550	85050		X
85551	85051		X
85552	85051		X
85559	85059		X
85560	85060		X
	85061		X
85561	85061		X
	85062		X
85568	85069	X	
85569	85070		X
85580	85086	X	
	85087	X	
85581	85083	X	
	85088	X	
85582	85086	X	
85583	85084	X	
	85085	X	
85584	85083	X	
	85088	X	
	85089	X	
85590	85097		X
	85098		X

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-68.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Garden Center Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85502	85001		X
	85002		X
	85005		X
85508	85010		X
	85011	X	
	85012	X	
85512	85015	X	
85517	85021		X
	85022		X
	85023		X
	85024		X
85518	85021		X
	85022		X
	85023		X
	85024		X
85519	85021		X
	85022		X
	85023		X
	85024		X
	85081	X	
	85082		X
85521	85025		X
	85026		X
85522	85025		X
	85026		X
85528	85030		X
	85033		X
85530	85033		X
85531	85019		X
	85020		X
	85034		X
85532	85034		X
	85019		X
	85020		X
85534	85033		X
85540	85040	X	
	85041	X	
	85042	X	
85541	85040	X	
	85041	X	
	85042	X	
85542	85043		X
85543	85043		X
	85045		X
85544	85044		X
85545	85043		X
85546	85045		X
	85046		X
85547	85047		X
85548	85048		X
85549	85049		X
85550	85050		X
85551	85051		X
85552	85051		X
85560	85060		X
	85061		X
85563	85063	X	
	85064	X	
	85065	X	
85564	85066	X	
85568	85069		X
85569	85070		X
85580	85086	X	
	85087	X	
85581	85088	X	
	85083	X	
85582	85086	X	
85583	85084	X	
	85085	X	
85584	85083	X	
	85088	X	
	85089	X	
85585	85093		X
85586	85094		X
	85097		X
	85099		X
85587	85094		X
	85095		X
	85097		X
	85098		X
	85099		X
85589	85096		X
	85097		X

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-69.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Groundskeeping and/or Park Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85515	85025	X	
85516	85020	X	
85517	85021	X	
	85022	X	
	85023	X	
	85024	X	
85518	85021	X	
	85022	X	
	85023	X	
	85024	X	
85519	85021	X	
	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85520	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85521	85025	X	
	85026	X	
85522	85025	X	
	85026	X	
85523	85026	X	
85524	85027	X	
	85028	X	
	85029	X	
85525	85028	X	
	85029	X	
85526	85028	X	
	85029	X	
85527	85031	X	
	85033	X	
85528	85033	X	
	85030	X	
85530	85033	X	
85542	85043	X	
85543	85043	X	
	85045	X	
85544	85044	X	
85545	85043	X	
85546	85045	X	
	85046	X	
85547	85047	X	
85548	85048	X	
85549	85049	X	
85550	85050	X	
85551	85051	X	
85552	85051	X	
85554	85053	X	
85555	85057	X	
	85054	X	
	85055	X	
85556	85056	X	
85557	85056	X	
85558	85058	X	
85559	85059	X	
85560	85060	X	
	85061	X	
85561	85061	X	
	85062	X	
85562	85063	X	
85563	85063	X	
	85064	X	
	85065	X	
85564	85066	X	
85565	85067	X	
85566	85068	X	
85567	85069	X	
85568	85069	X	
85569	85070	X	
85570	85071	X	
85571	85072	X	
85572	85063	X	
	85073	X	
85573	85074	X	
85574	85075	X	
85575	85076	X	
85576	85077	X	
85577	85078	X	
85578	85079	X	
85580	85086	X	
	85087	X	
85582	85086	X	
85583	85084	X	
	85085	X	
85584	85083	X	
	85088	X	
	85089	X	
85585	85093		X

85590	85097		X
	85098		X
85591	85100	X	
	85101	X	
85592	85100	X	
	85102	X	
	85103	X	
85593	85100	X	
	85102	X	
	85104	X	
85594	85102	X	
	85105	X	
85595	85106	X	
85596	85107	X	

85597	85108	X	
85600	85110	X	
85601	85106	X	
	85107	X	
	85109	X	
	85111	X	

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-70.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Landscaping Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85513	85016	X	
85514	85017	X	
	85018	X	
	85019	X	
85515	85025	X	
85516	85020	X	
85517	85021	X	
	85022	X	
	85023	X	
	85024	X	
85518	85021	X	
	85022	X	
	85023	X	
	85024	X	
85519	85021	X	
	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85520	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85521	85025	X	
	85026	X	
85522	85025	X	
	85026	X	
85524	85027	X	
	85028	X	
	85029	X	
85525	85028	X	
	85029	X	

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85527	85031	X	
	85033	X	
85528	85030	X	
	85033	X	
85530	85033	X	
85531	85019	X	
	85020	X	
	85034	X	
85532	85019	X	
	85020	X	
	85034	X	
85533	85034	X	
85534	85033	X	
85542	85043	X	
85543	85043	X	
	85045	X	
85544	85044	X	
85545	85043	X	
85546	85045	X	
	85046	X	
85547	85047	X	
85548	85048	X	
85549	85049	X	
85550	85050	X	
85551	85051	X	
85552	85051	X	
85553	85052	X	
85554	85053	X	

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85555	85054	X	
	85055	X	
	85057	X	
85556	85056	X	
85557	85056	X	
85558	85058	X	
85559	85059	X	
85560	85060	X	
	85061	X	
85561	85061	X	
	85062	X	
85562	85063	X	
85563	85063	X	
	85064	X	
	85065	X	
85564	85066	X	
85566	85068	X	
85567	85069	X	
85568	85069	X	
85569	80570	X	
85570	85071	X	
85572	85063	X	
	85073	X	
85573	85074	X	
85574	85075	X	
85575	85076	X	
85576	85077	X	

85577	85078	X	
85578	85079	X	
85580	85086 85087	X X	
85581	85083 85088	X X	
85583	85084 85085	X X	
85584	85083 85088 85089	X X X	
85591	85100 85101	X X	
85592	85100 85102 85103	X X X	
85593	85100 85102 85104	X X X	
85594	85102 85105	X X	
85595	85106	X	
85596	85107	X	
85597	85108	X	
85601	85106 85107 85109 85111	X X X X	

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-71.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Nursery Production Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85508	85010	X	
	85011	X	
	85012	X	
85517	85021	X	
	85022	X	
	85023	X	
	85024	X	
85518	85021	X	
	85022	X	
	85023	X	
	85024	X	
85519	85021	X	
	85022	X	
	85023	X	
	85024	X	
85521	85025	X	
	85026	X	
85522	85025	X	
	85026	X	
85528	85030	X	
	85033	X	
85530	85033	X	
85531	85019	X	
	85020	X	
	85034	X	
85534	85033	X	
85542	85043	X	
85544	85044	X	
85545	85043	X	
85546	85045	X	
	85046	X	
85548	85048	X	
85549	85049	X	
85550	85050	X	
85560	85060	X	
	85061	X	
85563	85063	X	
	85064	X	
	85065	X	
85568	85069	X	
85569	85070	X	
85570	85071	X	
85572	85063	X	
	85073	X	
85580	85086	X	
	85087	X	
85581	85083	X	
	85088	X	
85583	85084	X	
85084	85083	X	
	85088	X	
	85089	X	

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job Knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-72.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into the Turf and Sprinkler Industry.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85508	85010	X	
	85011	X	
	85012	X	
85510	85014	X	
	85012	X	
85511	85014	X	
85512	85015	X	
85513	85016	X	
85514	85017	X	
	85018	X	
	85019	X	
85515	85025	X	
85516	85020	X	
85517	85021	X	
	85022	X	
	85023	X	
	85024	X	
85518	85021	X	
	85022	X	
	85023	X	
	85024	X	
85519	85021	X	
	85022	X	
	85023	X	
	85024	X	
	85082	X	
	85081	X	
85520	85022	X	
	85023	X	
	85024	X	
	85081	X	
	85082	X	
85521	85025	X	
	85026	X	
85522	85025	X	
	85026	X	
85523	85026	X	
85524	85027	X	
	85028	X	
	85029	X	
85525	85028	X	
	85029	X	
85526	85028	X	
	B5029	X	
85527	85031	X	
	85033	X	
85528	85030	X	
	85033	X	
85530	85033	X	
85531	85019	X	
	85020	X	
	85034	X	
85532	85034	X	
	85019	X	
	85020	X	
85533	85034	X	
85534	85033	X	
85541	85040	X	
	85041	X	
	85042	X	
85542	85043	X	
85543	85043	X	
	85045	X	
85544	85044	X	
85545	85043	X	
85546	85045	X	
	85046	X	
85547	85047	X	
85548	85048	X	
85549	85049	X	
85550	85050	X	
85551	85051	X	
85552	85051	X	
85553	85052	X	
85554	85053	X	
85555	85054	X	
	85055	X	
	85057	X	
85556	85056	X	
85557	85056	X	
85558	85058	X	
85559	85059	X	
85560	85060	X	
	85061	X	
85561	85061	X	
	85062	X	
85562	85063	X	
85563	85063	X	
	85064	X	
	85065	X	
85564	85066	X	
85565	85067	X	
85566	85068	X	

85567	85069	X	
85568	85069	X	
85569	85070	X	
85570	85071	X	
85571	85072	X	
85572	85063 85073	X X	
85573	85074	X	
85574	85075	X	
85575	85076	X	
85576	85077	X	
85577	85078	X	
85578	85079	X	
85580	85086 85087	X X	
85581	85083 85088	X X	
85582	85086	X	
85583	85084 85085	X X	
85584	85083 85089 85088	X X X	
85586	85097 85094 85099	X X X	
85587	85098 85094 85095 85097 85099	 X X X X	X
85588	85094 85095 85097 85099	X X X X	
85590	85097 85098	X 	 X
85591	85100 85101	X X	
85592	85100 85102 85103	X X X	
85593	85100 85102 85104	X X X	
85594	85102 85105	X X	
85595	85106	X	
85596	85107	X	
85597	85108	X	
85600	85110	X	
85601	85106 85107 85109 85111	X X X X	

[a] See Table S-9 for job knowledge descriptions.

[b] See Table S-8 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-73.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Farm Implement Repair.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85501	85001	X	
	85002	X	
85502	85001	X	
	85002	X	
	85003	X	
	85004	X	
85503	85002	X	
85505	85005	X	
	85169	X	
	85199	X	
85506	85006	X	
	85007	X	
	85168	X	
	85202	X	
	85203	X	
85507	85008	X	
85508	85009	X	
	85171	X	
	85172	X	
85509	85009	X	
	85171	X	
85510	85009		
	85010	X	
	85171	X	
85511	85011	X	
	85017	X	
	85172	X	
85512	85012	X	
	85021	X	
	85022		X
85519	85020	X	
	85027	X	
	85171	X	
85520	85027	X	
85522	85028	X	
85528	85055	X	
85529	85050	X	
85530	85051	X	
	85054	X	
85531	85052	X	
85532	85051	X	
	85056	X	
	85057	X	
85534	85050	X	
	85061	X	
85565	85064	X	
	85081	X	
	85091	X	
	85118	X	
85566	85058	X	
	85121	X	
85567	85058	X	
	85067	X	
85569	85058	X	
85570	85048	X	
	85049	X	
85571	85047	X	
	85074	X	
85572	85047	X	
85573	85126	X	
	85127	X	
85574	85131	X	
	85124	X	
	85128	X	
	85129	X	
	85134		
85575	85124	X	
85576	85132	X	
85577	85129	X	
	85131	X	
85581	85126	X	
85582	85146	X	
	85167	X	
85583	85143	X	
	85144	X	
	85147	X	
85584	85140	X	
	85173	X	
85585	85149	X	
	85164	X	
85588	85141	X	
	85142	X	
85592	85150	X	
	85174	X	
	85178	X	
	85182	X	
85593	85150	X	
85594	85150	X	
	85176	X	
85595	85148	X	
	85180	X	
85596	85151	X	
	85152	X	
	85154	X	
85597	85151	X	
	85155	X	
85598	85156	X	
85599	85151	X	
	85153	X	
	85161	X	

85600	85151	X	
85601	85151	X	
	85230	X	
	85231	X	
85602	85158	X	
	85228	X	
	85229	X	
85603	85158	X	
	85228	X	
	85229	X	
85604	85159	X	
85607	85164	X	
85609	85181	X	
85617	85185	X	
	85196	X	
85618	85185	X	
	85190	X	
85620	85178	X	
	85188	X	
85621	85169	X	
	85174	X	
	85175	X	
	85176	X	
	85184	X	
	85188	X	
	85195	X	
	85202	X	
85622	85186	X	
85624	85182	X	
	85194	X	
85625	85176	X	
85629	85168	X	
85632	85209	X	
	85211	X	
85634	85212	X	
	85213	X	
85647	85223	X	
85648	85223	X	
85649	85224	X	
85653	85235	X	
	85236	X	
85661	85242	X	
85662	85242	X	
	85243	X	
85665	85246	X	

[a] See Table S-10 for job knowledge descriptions.

[b] See Table S-9 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

181

Table S-74.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Agricultural Chemical Biological-Technical Services.

Accepted Job Knowledge	Associated Job Skills			Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85682	85103	X		85717	85144	X	
					85145	X	
85685	85106	X			85146	X	
	85109		X	85718	85147		X
85686	85107		X	85719	85145	X	
85691	85114		X		85146	X	
85692	85114		X	85730	85163	X	
	85517		X	85731	85164	X	
85694	85115		X	85732	85165		X
	85116		X		85167	X	
85695	85116		X		85172	X	
85696	85116		X	85733	85173	X	
	85118	X			85168	X	
	85119	X			85166	X	
85697	85121	X		85734	85169		X
85701	85120	X		85735	85170	X	
	85125	X			85175	X	
	85128	X			85176	X	
85714	85141	X		85740	85182	X	
85715	85138	X		85741	85182	X	
	85142		X	85752	85192	X	
	85143	X					
	85144	X					
85716	85144	X					
	85145	X					
	85146	X					

[a]See Table S-12 for job knowledge descriptions.

[b]See Table S-11 for job skill descriptions.

[c]It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-75.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Animal Laboratory Biological-Technical Services

Accepted Job Knowledge	Associated Job Skills			Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]	Code No.[a]	Code No.[b]	Accept	Review[c]
85501	85001	X		85550	85019		X
85502	85001	X		85559	85023	X	
85503	85002	X		85560	85023	X	
85505	85004	X		85569	85027		X
85511	85004	X		85577	85029	X	
85512	85004	X		85578	85029	X	
85513	85005	X		85579	85029	X	
85518	85007		X	85582	85030	X	
85520	85008	X		85591	85034		X
85523	85009	X		85592	85035		X
85525	85010	X			85036	X	
					85037		X
85531	85012		X	85593	85035		X
85536	85014	X			85036	X	
85537	85014	X			85037		X
					85039	X	
85540	85015	X		85594	85034		X
	85016	X		85596	85038		X
85543	85016	X			85040	X	
					85041		X
85545	85017	X		85597	85038		X
					85040	X	
85548	85019		X		85041		X
85549	85019		X	85598	85038		X
					85039	X	
				85614	85048	X	
					85049	X	

[a]See Table S-12 for job knowledge descriptions.

[b]See Table S-11 for job skill descriptions.

[c]It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-76.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Food Processing Biological-Technical Services.

NONE MARKED "ACCEPT"

Table S-77.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Grain, Feed, and/or Seed Biological-Technical Services.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85505	85004	X	
85506	85009	X	
85508	85003	X	
85525	85010	X	
85528	85011	X	
85531	85012	X	
85532	85012	X	
85537	85014	X	
85548	85019	X	
85549	85019	X	
85550	85019	X	
85561	85024	X	
85562	85025	X	
85580	85029	X	
85581	85030	X	
85582	85030	X	
85615	85050	X	
85620	85052	X	
85671	85090	X	
85673	85092	X	
85674	85093	X	
85675	85093	X	
85676	85093	X	
	85095	X	
	85098	X	
85677	85095	X	
	85096	X	
	85097	X	
	85099	X	
85678	85100	X	
	85101	X	
85680	85102	X	
85681	85094	X	
85682	85103	X	
85684	85105	X	
	85108		X
85706	85133	X	
85707	85134	X	
	85135	X	
85708	85136	X	
85714	85141	X	
85715	85142	X	
	85138	X	
	85143	X	
	85144	X	
85716	85144	X	
	85145	X	
	85146	X	
85717	85143	X	
	85145	X	
	85146	X	
85719	85145	X	
	85146	X	
85722	85149	X	
	85150	X	
	85151	X	
	85152	X	
	85153	X	
85741	85182	X	
85749	85190		X
85752	85192		X

[a] See Table S-12 for job knowledge descriptions.

[b] See Table S-11 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

Table S-78.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Waste Disposal Biological-Technical Services.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85661	85089	X	
	85081	X	
85662	85081	X	
85664	85082	X	
	85084		X
85665	85083	X	
	85085	X	
85667	85087	X	
85568	85087	X	
85730	85163		X
85731	85164		X

[a] See Table S-12 for job knowledge descriptions.

[b] See Table S-11 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry

Table S-79.--Disposition of Job Knowledges Marked "Accept" with Associated Job Skills Marked "Accept" or "Review" for Entry into Water Resources Biological-Technical Services.

Accepted Job Knowledge	Associated Job Skills		
Code No.[a]	Code No.[b]	Accept	Review[c]
85661	85081	X	
	85089	X	
85662	85081	X	
85664	85082	X	
	85084		X
85665	85083	X	
	85085	X	
85667	85087	X	
85668	85087	X	
85669	85085	X	
	85088	X	
85670	85082	X	
85682	85103		X
85685	85109		X
	85106		X
85686	85107		X
85691	85114		X
85692	85117		X
	85114		X
85694	85115		X
	85116		X
85695	85116		X
85696	85116		X
	85118		X
	85119		X
85697	85121		X
85701	85120		X
	85125	X	
	85128		X
85714	85141		X
85715	85138		X
	85142		X
	85143		X
	85144		X
85716	85144		X
	85145		X
	85146		-X
85717	85143		-X
	85145		X
	85146		X
85718	85147		X
85719	85145		X
	85146		X
85727	85160	X	
85730	85163	X	
85731	85164		X
85732	85172	X	
	85165		X
	85167		X
85733	85173	X	
	85168		X
	85166		X
85734	85169		X
85735	85175		X
	85176	X	
	85170	X	
85736	85171	X	
	85177	X	
85737	85177	X	
	85178	X	
85739	85181	X	
85740	85182		X
85741	85182		X
85752	85192		X

[a] See Table S-12 for job knowledge descriptions.

[b] See Table S-11 for job skill descriptions.

[c] It is recommended that both the job skills marked "review" and their associated job knowledge(s) be declared "not needed" (rejected) for job entry.

SERIES G

DISPOSITION OF JOB SKILLS MARKED "REVIEW" WITH ASSOCIATED JOB KNOWLEDGES MARKED "ACCEPT" OR "REVIEW" FOR ENTRY

Table S-80.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Dairy Farming.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85024	85544		X
	85545		X
85058	85591		X
	85592		X
85059	85592		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

Table S-81.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Bush and/or Vine Fruit Farming.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85030	85558		X
	85559		X
85037	85568		X
85039	85569		X
	85570		X
85040	85571	X	
85042	85571	X	
85043	85572		X
	85576		X
85044	85573		X
85045	85574		X
	85575		X
85046	85576		X
85047	85576		X
	85578		X
	85577		X
85048	85578		X
	85579		X
	85580		X
85049	85581		X
	85582		X
	85583		X
85050	85584		X
	85585		X
	85586		X
85051	85587		X
85052	85588		X
85053	85589		X
85054	85589		X
85055	85589		X
85056	85590		X
85057			
85058	85591		X
	85592		X
85059	85592		X
85060	85593		X
	85594		X
85061	85595		X
	85596		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

Table S-82.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Tree Fruit Farming.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85060	85593		X
	85594		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-5 for job skill descriptions.

[b] See Table S-6 for job knowledge descriptions.

Table S-83.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Grain and/or Bean Farming.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85038	85569		X
	85570		X
85058	85591		X
	85592		X
85059	85592		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

Table S-84.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Livestock (Beef, Swine, Sheep) Farming.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85058	85591		X
	85592		X
85059	85592		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

Table S-85.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Poultry Farming.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85023	85543		X
85030	85558		X
	85559		X
85038	85569	X	
	85570	X	
85053	85589		X
85054	85589		X
85055	85589		X
85056	85590		X
85057			
85061	85595		X
	85596	X	
85069	85608		X
	85609		X
85092	85631		X
85117	85654	X	

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

Table S-86.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Vegetable, Beet, and/or Potato Farming.

Job Skill Marked Review	Associated Job Knowledges			Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review	Code No.[a]	Code No.[b]	Accept	Review
85024	85544		X	85049	85581		X
	85545		X		85582		X
					85583		X
85030	85558		X	85050	85584		X
	85559		X		85585		X
					85586		X
85038	85569		X	85055	85589		X
	85570		X				
85039	85569		X	85058	85591		X
	85570		X		85592		X
85043	85572		X	85059	85592		X
	85576		X				
85044	85573		X	85060	85593		X
					85594		X
85045	85574		X				
	85575		X				
85046	85576		X				
85048	85578		X				
	85579		X				
	85580		X				

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-5 for job skill descriptions.

[b]See Table S-6 for job knowledge descriptions.

Table S-87.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Arboriculture Industry.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
	85503		X
85002	85502		X
	85503		X
	85504		X
	85505		X
85003	85503		X
	85504		X
	85505		X
	85506		X
85004	85503		X
85006	85503		X
85007	85504		X
85008	85504		X
	85503		X
85009	85504		X
85010	85507		X
	85508		X
85011	85508		X
85036	85535		X
85037	85536		X
85038	85537		X
85039	85538		X
	85539		X
85061	85560		X
	85561	X	
85077	85576	X	
85090	85579		X
85091	85579		X
85093	85585		X
85094	85586		X
	85587		X
	85588		X
85095	85587		X
	85588		X
85097	85586		X
	85587		X
	85588		X
	85589		X
	85590		X
85098	85590		X
	85587		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-7 for job skill descriptions.

[b]See Table S-8 for job knowledge descriptions.

Table S-88.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Bedding Plant Industry.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
	85503		X
85002	85502		X
	85503		X
	85504		X
	85505		X
85003	85503		X
	85504		X
	85505		X
	85506		X
85004	85503		X
85005	85502		X
	85503		X
85006	85503		X
85007	85504		X
85008	85504		X
	85503		X
85013	85509		X
85018	85514		X
85019	85532		X
	85514		X
	85531		X
85020	85516		X
	85531		X
	85532		X
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520		X
85023	85517	X	
	85518	X	
	85519	X	
	85520		X
85024	85517	X	
	85518	X	
	85519	X	
	85520		X
85025	85515		X
	85521	X	
	85522	X	
85026	85521	X	
	85522	X	
	85523	X	
85027	85524		X
85028	85524		X
	85525		X
	85526		X
85032	85529		X
85034	85531		X
	85532		X
	85533		X
85035			
85045	85543	X	
	85546	X	
85046	85546	X	
85047	85547		X
85048	85548	X	
85049	85549	X	
85050	85550	X	
85051	85551	X	
	85552	X	
85052	85553		X
85053	85554		X
85054	85555		X
85055	85555		X
85056	85556		X
	85551		X
85057	85555		X
85058	85558		X
85059	85559	X	
85060	85560	X	
85061	85560	X	
	85561	X	
85062	85561	X	
85068	85566		X
85070	85569	X	
85071	85570		X
85072	85571		X
85077	85576		X
85078	85577		X
85079	85578		X
85090	85579		X
85091	85579		X
85093	85585		X

85094	85586		X
	85587		X
	85588		X
85095	85587		X
	85588		X
85096	85589		X
85097	85586		X
	85587		X
	85588		X
	85589		X
	85590	X	
85098	85590	X	
	85587		X
85099	85586		X
	85587		X
	85588		X
85100	85591		X
	85592		X
	85593		X
85101	85591		X
85102	85592		X
	85593		X
	85594		X
85106	85595		X
	85601		X
85107	85596		X
	85601		X
85108	85597		X
85110	85600		X
85111	85601		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

199

6

Table S-89.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Garden Center Industry.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502	X	
	85503		X
85002	85502	X	
	85503		X
	85504		X
	85505		X
85004	85503		X
85005	85502	X	
	85503		X
85006	85503		X
85007	85504		X
85008	85504		X
	85503		X
85010	85507		X
	85508	X	
85013	85509		X
85016	85513		X
85017	85514		X
85018	85514		X
85019	85532	X	
	85514		X
	85531	X	
85020	85516		X
	85531	X	
	85532	X	
85021	85517	X	
	85518	X	
	85519	X	
85022	85517	X	
	85518	X	
	85519	X	
	85520		X
85023	85517	X	
	85518	X	
	85519	X	
	85520		X
85024	85517	X	
	85518	X	
	85519	X	
	85520		X
85025	85515		X
	85521	X	
	85522	X	
85026	85521	X	
	85522	X	
	85523		X
85027	85524		X
85028	85524		X
	85525		X
	85526		X
85029	85524		X
	85525		X
	85526		X
85030	85528	X	
85031	85527		X
85032	85529		X
85033	85528	X	
	85530	X	
	85527		X
	85534	X	
85034	85531	X	
	85532	X	
	85533		X
85035			
85043	85542	X	
	85543	X	
	85545	X	
85044	85544	X	
85045	85543	X	
	85546	X	
85046	85546	X	
85047	85547	X	
85048	85548	X	
85049	85549	X	
85050	85550	X	
85051	85551	X	
	85552	X	
85052	85553		X
85053	85554		X
85054	85555		X
85055	85555		X
85056	85556		X
	85557		X
85057	85555		X
85058	85558		X
85059	85559		X
85060	85560	X	

85061	85560	X	
	85561		X
85062	85561		X
85068	85566		X
85069	85567		X
	85568	X	
85070	85569	X	
85071	85570		X
85072	85571		X
85075	85574		X
85076	85575		X
85077	85576		X
85078	85577		X
85079	85578		X
85082	85519	X	
	85520		X
85090	85579		X
85093	85585	X	
85094	85586	X	
	85587	X	
	85588		X
85095	85587	X	
	85588		X
85096	85589	X	
85097	85586	X	
	85587	X	
	85588		X
	85589	X	
	85590		X
85098	85590		X
	85587	X	
85099	85586	X	
	85587	X	
	85588		X
85100	85591		X
	85592		X
	85593		X
85101	85591		X
85102	85592		X
	85593		X
	85594		X
85103	85592		X
85104	85593		X
85105	85594		X
85106	85595		X
	85601		X
85107	85596		X
	85601		X
85108	85597		X
85109	95598		X
	85599		X
	85601		X
85110	85600		X
85111	85601		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-7 for job skill descriptions.

[b]See Table S-8 for job knowledge descriptions.

Table S-90.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Groundskeeping and/or Park Industry.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
	85503		X
85002	85502		X
	85503		X
	85504		X
	85505		X
85003	85503		X
	85504		X
	85505		X
	85506		X
85004	85503		X
85005	85502		X
	85503		X
85006	85503		X
85007	85504		X
85008	85504		X
	85503		X
85009	85504		X
85010	85507		X
	85508		X
85013	85509		X
85014	85510		X
	85511		X
85015	85512		X
85036	85535		X
85037	85536		X
85038	85537		X
85039	85538		X
	85039		X
85090	85579		X
85091	85579		X
85092	85579		X
85093	85585	X	
85094	85586		X
	85587		X
	85588		X
85095	85587		X
	85588		X
85096	85589		X
85097	85586		X
	85587		X
	85588		X
	85589		X
	85590	X	
85098	85590	X	
	85587		X
85099	85586		X
	85587		X
	85588		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-7 for job skill descriptions.

[b]See Table S-8 for job knowledge descriptions.

Table S-91.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Landscaping Industry.

Job Skill Marked Review	Associated Job Knowledges			Job Skill Marked Review	Associated Job Knowledges			Job Skill Marked Review	Associated Job Knowledges		
Code no.[a]	Code No.[b]	Accept	Review	Code No.[a]	Code No.[b]	Accept	Review	Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X	85038	85537		X				
	85502		X								
	85503		X	85039	85538		X				
					85539		X				
85002	85502		X								
	85503		X	85090	85579		X				
	85504		X								
	85505		X	85091	85579		X				
85003	85503		X	85093	85585		X				
	85504		X								
	85505		X	85094	85586		X				
	85506		X		85587		X				
					85588		X				
85004	85503		X								
				85095	85587		X				
85005	85502		X		85588		X				
	85503		X								
				85096	85589		X				
85006	85503		X								
				85097	85586		X				
85007	85504		X		85587		X				
					85588		X				
85008	85504		X		85589		X				
	85503		X		85590		X				
85010	85507		X	85098	85590		X				
	85508		X		85587		X				
85036	85535		X	85099	85586		X				
					85587		X				
85037	85536		X		85588		X				

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

Table S-92.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Nursery Production Industry.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
	85503		X
85002	85502		X
	85503		X
	85504		X
	85505		X
85003	85503		X
	85504		X
	85505		X
	85506		X
85004	85503		X
85005	85502		X
	85503		X
85006	85503		X
85008	85504		X
	85503		X
85013	85509		X
85036	85535		X
85037	85536		X
85038	85537		X
85052	85553		X
85057	85555		X
85090	85579		X
85091	85579		X
85093	85585		X
85094	85586		X
	85587		X
	85588		X
85095	85587		X
	85588		X
85096	85589		X
85097	85586		X
	85587		X
	85588		X
	85589		X
	85590		X
85098	85590		X
	85587		X
85099	85586		X
	85587		X
	85588		X
85100	85591		X
	85592		X
	85593		X
85101	85591		X
85102	85592		X
	85593		X
	85594		X
85103	85592		X
85104	85593		X
85109	85598		X
	85599		X
	85601		X
85110	85600		X
85111	85601		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-8 for job skills descriptions.

[b]See Table S-7 for job knowledge descriptions.

Table S-93.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into the Turf and Sprinkler Industry.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
	85503		X
85002	85502		X
	85503		X
	85504		X
	85505		X
85003	85503		X
	85504		X
	85505		X
	85506		X
85004	85503		X
85005	85502		X
	85503		X
85006	85503		X
85036	85535		X
85037	85536		X
85038	85537		X
85039	85538		X
	85539		X
85090	85579		X
85091	85579		X
85093	85585		X
85098	85590	X	
	85587	X	

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-7 for job skill descriptions.

[b] See Table S-8 for job knowledge descriptions.

Table S-94.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Farm Implement Repair.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85022	85512	X	
85037	85526		X
85039			
85077	85548		X
85098	85556		X
85133			
85206	85630		X
	85631		X
85210	85633		X
85222	85641		X
	85644		X
	85645		X
	85646		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-9 for job skill descriptions.

[b]See Table S-10 for job knowledge descriptions.

Table S-95.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Agricultural Chemical Biological-Technical Services.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85004	85505		X
	85511		X
	85512		X
85005	85513		X
	85514		X
	85515		X
85006	85516		X
	85517		X
85007	85518		X
	85519		X
85008	85520		X
	85521		X
	85522		X
85010	85525		X
85011	85526		X
	85527		X
	85528		X
85012	85529		X
	85530		X
	85531		X
	85532		X
85013	85533		X
	85534		X
	85535		X
85015	85539		X
	85540		X
85016	85539		X
	85540		X
	85541		X
	85542		X
	85543		X
	85544		X
85017	85544		X
	85545		X
	85546		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85018	85546		X
	85547		X
85019	85548		X
	85549		X
	85550		X
85020	85551		X
	85552		X
85021	85553		X
	85554		X
	85555		X
	85556		X
85022	85555		X
	85557		X
	85558		X
85023	85559		X
	85560		X
85024	85561		X
85025	85562		X
	85563		X
	85564		X
	85565		X
85026	85566		X
	85567		X
	85568		X
85027	85569		X
	85570		X
	85571		X
85028	85572		X
	85573		X
	85574		X
	85575		X
85029	85576		X
	85577		X
	85578		X
	85579		X
	85580		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85030	85581		X
	85582		X
85031	85583		X
	85584		X
	85585		X
	85586		X
85032	85587		X
	85588		X
	85589		X
85033	85587		X
	85588		X
	85589		X
85037	85592		X
	85593		X
85038	85595		X
	85596		X
	85597		X
	85598		X
85039	85599		X
	85598		X
	85593		X
85040	85596		X
	85597		X
85041	85596		X
	85597		X
85042	85600		X
	85601		X
85043	85602		X
	85603		X
	85604		X
85044	85604		X
	85605		X

85045	85606 85607 85608		X X X
85046	85608 85609		X X
85047	85610 85611 85612 85613		X X X X
85048	85614		X
85049	85611 85614		X X
85050	85615 85616		X X
85051	85617 85618		X X
85054	85624 85625		X X
85055	85626 85627 85630		X X X
85056	85626 85627 85628 85630		X X X X
85057	85629 85630 85631		X X X
85058	85623 85621		X X
85059	85632 85633		X X
85060	85634		X
85061	85635		X
85062	85636		X
85063	85637		X
85064	85638 85639		X X

85065	85640 85641		X X
85066	85642		X
85067	85642		X
85068	85643 85644 85645		X X X
85069	85644 85645		X X
85070	85646 85647		X X
85071	85648		X
85072	85649		X
85073	85650		X
85074	85651 85652		X X
85075	85653 85654		X X
85076	85655		X
85077			
85078	85656		X
85079	85657 85658 85659		X X X
85080	85660		X
85083	85665 85666		X X
85084	85664		X
85085	85665 85669		X X
85086	85666		X
85087	85567 85568		X X
85088	85669		X

85089	85661		X
85090	85671		X
85102	85679 85680		X X
85104	85683		X
85107	85686	X	
85109	85685	X	
85110	85687		X
85113	85690		X
85114	85691 85692	X X	
85115	85693 85694	 X	X
85116	85694 85695 85696	X X X	
85117	85692	X	
85122	85698		X
85129	85700		X
85130	85702 85703		X X
85131	85702 85703 85704		X X X
85133	85706		X
85134	85707		X
85135	85707		X
85142	85715	X	
85147	85718 85720	X	 X
85148	85721		X
85149	85722 85723 85724		X X X

Table S-95.--Continued.

Job Skill Marked Review	Associated Job Knowledges			Job Skill Marked Review	Associated Job Knowledges			Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review	Code No.[a]	Code No.[b]	Accept	Review	Code No.[a]	Code No.[b]	Accept	Review
85150	85722		X	85158	85726		X	85187	85746		X
	85723		X								
	85724		X	85162	85729		X	85188	85747		X
85151	85722		X	85165	85732	X		85189	85748		X
	85723		X								
	85724		X	85169	85734	X		85190	85749		X
									85750		X
85153	85722		X	85171	85736		X				
	85723		X								
	85724		X	85174							
85154	85725		X	85184	85743		X				
85156				85185	85744		X				
85157	85726		X	85186	85745		X				

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-11 for job skill descriptions.

[b]See Table S-12 for job knowledge descriptions.

Table S-96.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Animal Laboratory Biological-Technical Services.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85006	85516		X
	85517		X
85007	85518	X	
	85519		X
85011	85526		X
	85527		X
	85528		X
85012	85529		X
	85530		X
	85531	X	
	85532		X
85013	85533		X
	85534		X
	85535		X
85019	85548	X	
	85549	X	
	85550	X	
85020	85551		X
	85552		X
85021	85553		X
	85554		X
	85555		X
	85556		X
85026	85566		X
	85567		X
	85568		X
85027	85569	X	
	85570		X
	85571		X
85028	85572		X
	85573		X
	85574		X
	85575		X
85031	85583		X
	85584		X
	85585		X
	85586		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85032	85587		X
	85588		X
	85589		X
85033	85587		X
	85588		X
	85589		X
85034	85594	X	
	85590		X
	85591	X	
85035	85592	X	
	85593	X	
85037	85592	X	
	85593	X	
85038	85595		X
	85596	X	
	85597	X	
	85598	X	
85041	85596	X	
	85597	X	
85042	85600		X
	85601		X
85043	85602		X
	85603		X
	85604		X
85044	85604		X
	85605		X
85046	85608		X
	85609		X
85047	85610		X
	85611		X
	85612		X
	85613		X
85050	85615		X
	85616		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85051	85617		X
	85618		X
85052	85619		X
	85620		X
	85621		X
85053	85622		X
	85623		X
85054	85624		X
	85625		X
85055	85626		X
	85627		X
	85630		X
85056	85626		X
	85627		X
	85628		X
	85630		X
85057	85629		X
	85630		X
	85631		X
85058	85623		X
	85621		X
85059	85632		X
	85633		X
85060	85634		X
85061	85635		X
85062	85636		X
85063	85637		X
85064	85638		X
	85639		X
85065	85640		X
	85641		X

85066	85642		X
85067	85642		X
85068	85643 85644 85645		X X X
85069	85644 85645		X X
85070	85646 85647		X X
85071	85648		X
85072	85649		X
85073	85650		X
85074	85651 85652		X X
85075	85553 85554		X X
85076	85655		X
85077			
85078	85656		X
85079	85657 85658 85659		X X X
85080	85660		X
85081	85661 85662		X X
85082	85663 85670 85664		X X X
85083	85665 85666		X X
85084	85664		X
85085	85665 85669		X X
85086	85666		X

85087	85667 85668		X X
85088	85669		X
85089	85661		X
85090	85671		X
85091	85672		X
85092	85673		X
85093	85674 85675 85676		X X X
85094	85681		X
85095	85676 85677		X X
85096	85677		X
85097	85677		X
85098	85676		X
85099	85677		X
85100	85678		X
85101	85678		X
85102	85679 85680		X X
85103	85682		X
85104	85683		X
85105	85684		X
85106	85685		X
85107	85686		X
85108	85684		X
85109	85685		X
85110	85687		X
85111	85688		X

85112	85689		X
85113	85690		X
85114	85691 85692		X X
85115	85693 85694		X X
85116	85694 85695 85696		X X X
85117	85692		X
85118	85696		X
85119	85696		X
85120	85701		X
85121	85697		X
85122	85698		X
85123	85700		X
85124	85700		X
85125	85701		X
85126	85699		X
85127			
85128	85701		X
85129	85700		X
85130	85702 85703		X X
85131	85702 85703 85704		X X X
85132	85705		X
85133	85706		X
85134	85707		X
85135	85707		X
85136	85708		X
85137	85709 85710		X X
85138	85715		X

Table S-96.--Continued.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85139	85711		X
	85712		X
85140	85713		X
85141	85714		X
85142	85715		X
85143	85717		X
	85715		X
85144	85716		X
	85715		X
85145	85716		X
	85717		X
	85719		X
85146	85716		X
	85717		X
	85719		X
85147	85718		X
	85720		X
85148	85721		X
85149	85722		X
	85723		X
	85724		X
85150	85722		X
	85723		X
	85724		X
85151	85722		X
	85723		X
	85724		X
85152	85722		X
	85723		X
	85724		X
85153	85722		X
	85723		X
	85724		X
85154	85725		X
85155	85726		X
85156			
85157	85726		X
85158	85726		X
85159	85726		X
85160	85727		X
85161	85728		X
85162	85729		X
85163	85730		X
85164	85731		X
85165	85732		X
85166	85733		X
85167	85732		X
85168	85733		X
85169	85734		X
85170	85735		X
85171	85736		X
85172	85732		X
85173	85733		X
85174			
85175	85735		X
85176	85735		X
85177	85736		X
	85737		X
85178	85737		X
85179	85738		X
85180	85738		X
85181	85739		X
85182	85740		X
	85741		X
85183	85742		X
85184	85743		X
85185	85744		X
85186	85745		X
85187	85746		X
85188	85747		X
85189	85748		X
85190	85749		X
	85750		X
85191	85751		X
85192	85752		X
85193	85753		X

85194	85754		X
85195	85755		X
85196	85756		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-11 for job skill descriptions.

[b]See Table S-12 for job knowledge descriptions.

Table S-97.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Food Processing Biological-Technical Services.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
85002	85503		X
	85504		X
85004	85505		X
	85511		X
	85512		X
85005	85513		X
	85514		X
	85515		X
85006	85516		X
	85517		X
85007	85518		X
	85519		X
85008	85520		X
	85521		X
	85522		X
85009	85523		X
	85506		X
	85507		X
	85524		X
85010	85525		X
85011	85526		X
	85527		X
	85528		X
85012	85529		X
	85530		X
	85531		X
	85532		X
85013	85533		X
	85534		X
	85535		X
85014	85536		X
	85537		X
	85538		X
85015	85539		X
	85540		X
85016	85539		X
	85540		X
	85541		X
	85542		X
	85543		X
	85544		X
85017	85544		X
	85545		X
	85546		X
85018	85546		X
	85547		X
85019	85548		X
	85549		X
	85550		X
85020	85551		X
	85552		X
85021	85553		X
	85554		X
	85555		X
	85556		X
85022	85555		X
	85557		X
	85558		X
85023	85559		X
	85560		X
85024	85561		X
85025	85562		X
	85563		X
	85564		X
	85565		X
85026	85566		X
	85567		X
	85568		X
85027	85569		X
	85570		X
	85571		X
85028	85072		X
	85073		X
	85074		X
	85075		X
85029	85576		X
	85577		X
	85578		X
	85579		X
	85580		X
85030	85581		X
	85582		X
85031	85583		X
	85584		X
	85585		X
	85586		X
85032	85587		X
	85588		X
	85589		X
85033	85587		X
	85588		X
	85589		X
85034	85594		X
	85590		X
	85591		X
85035	85592		X
	85593		X
85036	85592		X
	85593		X
85037	85592		X
	85593		X

85038	85595 85596 85597 85598		X X X X
85039	85599 85598 85593		X X X
85040	85596 85597		X X
85041	85596 85597		X X
85042	85600 85601		X X
85043	85602 85603 85604		X X X
85044	85604 85605		X X
85045	85606 85607 85608		X X X
85046	85608 85609		X X
85047	85610 85611 85612 85613		X X X X
85048	85614		X
85049	85611 85614		X X
85050	85615 85616		X X
85051	85617 85618		X X
85052	85619 85620 85621		X X X
85053	85622 85623		X X

85054	85624 85625		X X
85055	85626 85627 85630		X X X
85056	85626 85627 85628 85630		X X X X
85057	85629 85630 85631		X X X
85058	85623 85621		X X
85059	85632 85633		X X
85060	85634		X
85061	85635		X
85062	85636		X
85063	85637		X
85064	85638 85639		X X
85065	85640 85641		X X
85066	85642		X
85067	85642		X
85068	85643 85644 85645		X X X
85069	85644 85645		X X
85070	85646 85647		X X
85071	85648		X
85072	85649		X

85073	85650		X
85074	85651 85652		X X
85075	85653 85654		X X
85076	85655		X
85077			
85078	85656		X
85079	85657 85658 85659		X X X
85080	85660		X
85083	85665 85666		X X
85084	85664		X
85085	85665 85669		X X
85086	85666		X
85087	85667 85668		X X
85088	85669		X
85089	85661		X
85090	85671		X
85091	85672		X
85092	85673		X
85093	85674 85675 85676		X X X
85094	85681		X
85095	85676 85677		X X
85096	85677		X

Table S-97.--Continued.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85097	85677		X
85098	85676		X
85099	85677		X
85100	85678		X
85101	85678		X
85102	85679 85680		X X
85103	85682		X
85104	85683		X
85105	85684		X
85107	85686		X
85109	85685		X
85110	85687		X
85113	85690		X
85114	85691 85692		X X
85115	85693 85694		X X
85116	85694 85695 85696		X X X
85117	85692		X
85119	85696		X
85121	85697		X
85122	85698		X
85124	85700		X
85127			

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85129	85700		X
85130	85702 85703		X X
85131	85702 85703 85704		X X X
85132	85705		X
85133	85706		X
85134	85707		X
85135	85707		X
85136	85708		X
85137	85709 85710		X X
85138	85715		X
85139	85711 85712		X X
85140	85713		X
85141	85714		X
85142	85715		X
85143	85717 85715		X X
85144	85716 85715		X X
85145	85716 85717 85719		X X X
85146	85716 85717 85719		X X X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Reivew
85147	85718 85720		X X
85148	85721		X
85149	85722 85723 85724		X X X
85150	85722 85723 85724		X X X
85151	85722 85723 85724		X X X
85152	85722 85723 85724		X X X
85153	85722 85723 85724		X X X
85154	85725		X
85155	85726		X
85156			
85157	85726		X
85158	85726		X
85159	85726		X
85160	85727		X
85161	85728		X
85162	85729		X
85164	85731		X
85165	85732		X

85166	85733		X	85183	85742		X
85167	85732		X	85184	85743		X
85168	85733		X	85185	85744		X
85169	85734		X	85186	85745		X
85170	85735		X	85187	85746		X
85171	85736		X	85188	85747		X
85172	85732		X	85189	85748		X
85173	85733		X	85190	85749 85750		X X
85174				85191	85751		X
85175	85735		X	85192	85752		X
85176	85735		X	85193	85753		X
85177	85736 85737		X X	85194	85754		X
85178	85737		X	85195	85755		X
85179	85738		X	85196	85756		X
85180	85738		X				
85181	85739		X				
85182	85740 85741		X X				

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-11 for job skill descriptions.

[b] See Table S-12 for job knowledge descriptions.

Table S-98.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Grain, Feed, and/or Seed Biological-Technical Services.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85005	85513		X
	85514		X
	85515		X
85006	85516		X
	85517		X
85007	85518		X
	85519		X
85026	85566		X
	85567		X
	85568		X
85027	85569		X
	85570		X
	85571		X
85028	85572		X
	85573		X
	85574		X
	85575		X
85038	85595		X
	85596		X
	85597		X
	85598		X
85040	85596		X
	85597		X
85041	85596		X
	85597		X
85042	85600		X
	85601		X
85043	85602		X
	85603		X
	85604		X
85044	85604		X
	85605		X
85046	85608		X
	85609		X
85054	85624		X
	85625		X
85055	85626		X
	85627		X
	85630		X
85056	85626		X
	85627		X
	85628		X
	85630		X
85057	85629		X
	85630		X
	85631		X
85066	85642		X
85074	85651		X
	85652		X
85076	85655		X
85077			
85078	85656		X
85079	85657		X
	85658		X
	85659		X
85081	85661		X
	85662		X
85082	85663		X
	85670		X
	85664		X
85083	85665		X
	85666		X
85084	85664		X
85085	85665		X
	85669		X
85086	85666		X
85087	85667		X
	85668		X
85088	85669		X
85089	85661		X
85107	85686		X
85108	85684	X	
85119	85696		X
85121	85697		X
85122	85698		X
85123	85700		X
85124	85700		X
85125	85701		X
85126	85699		X
85127			
85128	85701		X
85129	85700		X
85130	85702		X
	85703		X
85131	85702		X
	85703		X
	85704		X
85132	85705		X

85147	85718 85720		X X
85148	85721		X
85157	85726		X
85158	85726		X
85159	85726		X
85160	85727		X
85161	85728		X
85162	85729		X
85165	85732		X
85169	85734		X
85170	85735		X
85171	85736		X
85173	85733		X
85174			
85176	85735		X
85177	85736 85737		X X
85179	85738		X
85180	85738		X
85181	85739		X
85183	85742		X
85184	85743		X
85185	85744		X
85186	85745		X
85187	85746		X
85188	85747		X
85189	85748		X
85190	85749 85750	X	 X
85191	85751		X
85192	85752	X	

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-11 for job skill descriptions.

[b] See Table S-12 for job knowledge descriptions.

221

Table S-99.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Waste Disposal Biological-Technical Services.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
85002	85503		X
	85504		X
85003	85508		X
	85509		X
	85510		X
85004	85505		X
	85511		X
	85512		X
85005	85513		X
	85514		X
	85515		X
85006	85516		X
	85517		X
85007	85518		X
	85519		X
85008	85520		X
	85521		X
	85522		X
85009	85523		X
	85506		X
	85507		X
	85524		X
85010	85525		X
85011	85526		X
	85527		X
	85528		X
85012	85529		X
	85530		X
	85531		X
	85532		X
85013	85533		X
	85534		X
	85535		X
85014	85536		X
	85537		X
	85538		X
85015	85539		X
	85540		X
85016	85539		X
	85540		X
	85541		X
	85542		X
	85543		X
	85544		X
85017	85544		X
	85545		X
	85546		X
85018	85546		X
	85547		X
85019	85548		X
	85549		X
	85550		X
85020	85551		X
	85552		X
85021	85553		X
	85554		X
	85555		X
	85556		X
85022	85555		X
	85557		X
	85558		X
85023	85559		X
	85560		X
85024	85561		X
85025	85562		X
	85563		X
	85564		X
	85565		X
85026	85566		X
	85567		X
	85568		X
85027	85569		X
	85570		X
	85571		X
85028	85572		X
	85573		X
	85574		X
	85575		X
85029	85576		X
	85577		X
	85578		X
	85580		X
	85579		X
85030	85581		X
	85582		X
85031	85583		X
	85584		X
	85585		X
	85586		X
85032	85587		X
	85588		X
	85589		X
85033	85587		X
	85588		X
	85589		X
85034	85594		X
	85590		X
	85591		X
85035	85592		X
	85593		X
85036	85592		X
	85593		X
85037	85592		X
	85593		X

85038	85595		X
	85596		X
	85597		X
	85598		X
85039	85599		X
	85598		X
	85593		X
85040	85596		X
	85597		X
85041	85596		X
	85597		X
85042	85600		X
	85601		X
85043	85602		X
	85603		X
	85604		X
85044	85604		X
	85605		X
85045	85606		X
	85607		X
	85608		X
85046	85608		X
	85609		X
85047	85610		X
	85611		X
	85612		X
	85613		X
85048	85614		X
85049	85611		X
	85614		X
85050	85615		X
	85616		X
85051	85617		X
	85618		X
85052	85619		X
	85620		X
	85621		X
85053	85622		X
	85623		X
85054	85624		X
	85625		X

85055	85626		X
	85627		X
	85630		X
85056	85626		X
	85627		X
	85628		X
	85630		X
85057	85629		X
	85630		X
	85631		X
85058	85623		X
	85621		X
85059	85632		X
	85633		X
85060	85634		X
85061	85635		X
85062	85636		X
85063	85637		X
85064	85638		X
	85639		X
85065	85640		X
	85641		X
85066	85642		X
85067	85642		X
85068	85643		X
	85644		X
	85645		X
85069	85644		X
	85645		X
85070	85646		X
	85647		X
85071	85648		X
85072	85649		X
85073	85650		X
85074	85651		X
	85652		X

85075	85653		X
	85654		X
85076	85655		X
85077			
85078	85656		X
85079	85657		X
	85658		X
	85659		X
85080	85660		X
85084	85664	X	
85090	85671		X
85091	85672		X
85092	85673		X
85093	85674		X
	85675		X
	85676		X
85094	85681		X
85095	85676		X
	85677		X
85096	85677		X
85097	85677		X
85098	85676		X
85099	85677		X
85100	85678		X
85101	85678		X
85102	85679		X
	85680		X
85103	85682		X
85104	85683		X
85105	85684		X
85106	85685		X
85107	85686		X

223 G

Table S-99.--Continued.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85108	85684		X
85109	85685		X
85110	85687		X
85111	85688		X
85112	85689		X
85113	85690		X
85114	85691		X
	85692		X
85115	85693		X
	85694		X
85116	85694		X
	85695		X
	85696		X
85117	85692		X
85118	85696		X
85119	85696		X
85120	85701		X
85121	85697		X
85122	85698		X
85123	85700		X
85124	85700		X
85125	85701		X
85126	85699		X
85127			
85128	85701		X
85129	85700		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85130	85702		X
	85703		X
85131	85702		X
	85703		X
	85704		X
85132	85705		X
85133	85706		X
85134	85707		X
85135	85707		X
85136	85708		X
85137	85709		X
	85710		X
85138	85715		X
85139	85711		X
	85712		X
85140	85713		X
85141	85714		X
85142	85715		X
85143	85717		X
	85715		X
85144	85716		X
	85715		X
85145	85716		X
	85717		X
	85719		X
85146	85716		X
	85717		X
	85719		X
85147	85718		X
	85720		X

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85148	85721		X
85149	85722		X
	85723		X
	85724		X
85150	85722		X
	85723		X
	85724		X
85151	85722		X
	85723		X
	85724		X
85152	85722		X
	85723		X
	85724		X
85153	85722		X
	85723		X
	85724		X
85154	85725		X
85155	85726		X
85156			
85157	85726		X
85158	85726		X
85159	85726		X
85160	85727		X
85161	85728		X
85162	85729		X
85163	85730	X	
85164	85731	X	
85165	85732		X
85166	85733		X

85167	85732		X
85168	85733		X
85169	85734		X
85171	85736		X
85172	85732		X
85173	85733		X
85174			
85175	85735		X
85177	85736 85737		X X
85178	85737		X
85179	85738		X
85180	85739		X
85181	85739		X
85182	85740 85741		X X
85183	85742		X
85184	85743		X
85185	85744		X
85186	85745		X
85187	85746		X
85188	85747		X
85189	85748		X
85190	85749 85750		X X
85191	85751		X
85192	85752		X
85193	85753		X
85194	85754		X
85195	85755		X
85196	85756		X

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a]See Table S-11 for job skill descriptions.

[b]See Table S-12 for job knowledge descriptions.

225

G

Table S-100.--Disposition of Job Skills Marked "Review" with Associated Job Knowledges Marked "Accept" or "Review" for Entry into Water Resources Biological-Technical Services.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85001	85501		X
	85502		X
85002	85503		X
	85504		X
85004	85505		X
	85511		X
	85512		X
85005	85513		X
	85514		X
	85515		X
85006	85516		X
	85517		X
85007	85518		X
	85519		X
85008	85520		X
	85521		X
	85522		X
85009	85523		X
	85506		X
	85507		X
	85524		X
85010	85525		X
85011	85526		X
	85527		X
	85528		X
85012	85529		X
	85530		X
	85531		X
	85532		X
85013	85533		X
	85534		X
	85535		X
85014	85536		X
	85537		X
	85538		X
85015	85539		X
	85540		X
85016	85539		X
	85540		X
	85541		X
	85542		X
	85543		X
	85544		X
85017	85544		X
	85545		X
	85546		X
85018	85546		X
	85547		X
85019	85548		X
	85549		X
	85550		X
85020	85551		X
	85552		X
85021	85553		X
	85554		X
	85555		X
	85556		X
85022	85555		X
	85557		X
	85558		X
85023	85559		X
	85560		X
85024	85561		X
85025	85562		X
	85563		X
	85564		X
	85565		X
85026	85566		X
	85567		X
	85568		X
85027	85569		X
	85570		X
	85571		X
85028	85072		X
	85073		X
	85074		X
	85075		X
85029	85576		X
	85577		X
	85578		X
	85579		X
	85580		X
85030	85581		X
	85582		X
85031	85583		X
	85584		X
	85585		X
	85586		X
85032	85587		X
	85588		X
	85589		X
85033	85587		X
	85588		X
	85589		X
85034	85594		X
	85590		X
	85591		X
85035	85592		X
	85593		X
85036	85592		X
	85593		X
85037	85592		X
	85593		X

85038	85595		X
	85596		X
	85597		X
	85598		X
85039	85599		X
	85598		X
	85593		X
85040	85596		X
	85597		X
85041	85596		X
	85597		X
85042	85600		X
	85601		X
85043	85602		X
	85603		X
	85604		X
85044	85604		X
	85605		X
85045	85606		X
	85607		X
	85608		X
85046	85608		X
	85609		X
85047	85610		X
	85611		X
	85612		X
	85613		X
85048	85614		X
85049	85611		X
	85614		X
85050	85615		X
	85616		X
85051	85617		X
	85618		X
85052	85619		X
	85620		X
	85621		X
85053	85622		X
	85623		X
85054	85624		X
	85625		X

85055	85626		X
	85627		X
	85630		X
85056	85626		X
	85627		X
	85628		X
	85630		X
85057	85629		X
	85630		X
	85631		X
85058	85623		X
	85621		X
85059	85632		X
	85633		X
85060	85634		X
85061	85635		X
85062	85636		X
85063	85637		X
85064	85638		X
	85639		X
85065	85640		X
	85641		X
85066	85642		X
85067	85642		X
85068	85643		X
	85644		X
	85645		X
85069	85644		X
	85645		X
85070	85646		X
	85647		X
85071	85648		X
85072	85649		X
85073	85650		X
85074	85651		X
	85652		X

85075	85653		X
	85654		X
85076	85655		X
85077			
85078	85656		X
85079	85657		X
	85658		X
	85659		X
85080	85660		X
85084	85664	X	
85086	85666		X
85090	85671		X
85091	85672		X
85092	85673		X
85093	85674		X
	85675		X
	85676		X
85094	85681		X
85095	85676		X
	85677		X
85096	85677		X
85097	85677		X
85098	85676		X
85099	85677		X
85100	85678		X
85101	85678		X
85102	85679		X
	85680		X
85103	85682		X
85104	85683		X
85105	85684		X
85106	85685	X	

Table S-100.--Continued.

Job Skill Marked Review	Associated Job Knowledges		
Code No.[a]	Code No.[b]	Accept	Review
85107	85686	X	
85108	85684		X
85109	85685	X	
85110	85687		X
85111	85688		X
85112	85689		X
85113	85690		X
85114	85691	X	
	85692	X	
85115	85693		X
	85694		X
85116	85694	X	
	85695	X	
	85696	X	
85117	85692	X	
85118	85696	X	
85119	85696	X	
85120	85701	X	
85121	85697	X	
85122	85698		X
85123	85700		X
85124	85700		X
85127			
85128	85701	X	
85129	85700		X
85130	85702		X
	85703		X
85131	85702		X
	85703		X
	85704		X
85133	85706		X
85134	85707		X
85135	85707		X
85136	85708		X
85137	85709		X
	85710		X
85138	85715	X	
85139	85711		X
	85712		X
85140	85713		X
85141	85714	X	
85142	85715	X	
85143	85717	X	
	85715	X	
85144	85716	X	
	85715	X	
85145	85716	X	
	85717	X	
	85719	X	
85146	85716	X	
	85717	X	
	85719	X	
85147	85718	X	
	85720		X
85148	85721		X
85149	85722		X
	85723		X
	85724		X
85150	85722		X
	85723		X
	85724		X
85151	85722		X
	85723		X
	85724		X
85152	85722		X
	85723		X
	85724		X
85153	85722		X
	85723		X
	85724		X
85154	85725		X
85155	85726		X
85156			
85157	85726		X
85158	85726		X
85159	85726		X
85161	85728		X
85162	85729		X
85164	85731	X	
85165	85732	X	
85166	85733	X	
85167	85732	X	
85168	85733	X	
85169	85734	X	
85174			
85175	85735	X	

85182	85740 85741	X X		85187	85746		X	85192	85752	X	
				85188	85747		X	85193	85753		X
85183	85742		X	85189	85748		X	85194	85754		X
85184	85743		X	85190	85749 85750		X X				
85185	85744		X								
85186	85745		X	85191	85751		X				

NOTE: It is recommended that all job skills and associated job knowledges referred to in this table be declared "not needed" (rejected) for job entry.

[a] See Table S-11 for job skill descriptions.

[b] See Table S-12 for job knowledge descriptions.

APPENDIX A

TASK ANALYSIS SURVEY INSTRUMENTS
(SELECTED PAGES ONLY)

MICHIGAN STATE UNIVERSITY

Date Completed _____

Occupation: FARMING -- 85.1

Code No. _____

NAME: _____ POSITION: _____

EMPLOYER: _____ TELEPHONE: _____

ADDRESS: _____
(Street) (City) (State) (Zip)

Number of years experience in occupation: _____

Number of hours in work week: _____ in work day: _____

CRITICAL INCIDENT

Job Skills:

1. A critical incident is a skill or knowledge needed (desirable) for entry level employment in farming following high school graduation.
2. Please check each item in the skills list indicating answers to the following:
   a) Is the item an entry level skill for a high school graduate?
   b) What is the degree of importance to a person engaged in farming?

Definitions:

Essential -- Of utmost importance; competence in performing this task is absolutely necessary for entry level employment.

Very Important -- Competence in performing this task has much influence or effect on entry level employability.

Some Importance -- Competence in performing this task has some influence on entry level employability.

Minor Importance -- Competence in performing this task has no effect on entry level employability.

Not Needed -- Task does not apply for entry level employment.

232

SPECIAL NOTE

1. Since there are many types of farming in Michigan we suggest you check the lists of skills and knowledges as they apply to the type(s) of farming with which you are most familiar.

2. Please check below the type(s) of farming in which you are working:

Vegetable, beet, potato _____

Grain and/or beans _____

Livestock: beef, swine, sheep _____

Dairy _____

Poultry _____

Fruit, tree _____

Fruit, bush, vine _____

Other (specify) _____

_____

233

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: FARMING

JOB SKILLS	Relative Importance — Entry Skill	Not Needed	Minor Importance	Some Importance	Very Important	Essential	Code
Is able to:							
Soil Program							
1. Determine best use for each land capability class on the farm.	___	___	___	___	___	___	85001
2. Identify type of farming appropriate for the land capability classes of the farm.	___	___	___	___	___	___	85002
3. Use results of soil tests to specify fertilizer analysis for each crop on the farm.	___	___	___	___	___	___	85003
4. Identify crops appropriate for the soils of the farm.	___	___	___	___	___	___	85004
5. Specify amount of fertilizer per acre for crops to be grown on the farm.	___	___	___	___	___	___	85005
6. Determine form of plant food to use on the crops of the farm (dry, liquid, gas).	___	___	___	___	___	___	85006
7. Specify kind & amount of liming material to reach desired pH level in the soil.	___	___	___	___	___	___	85007
8. Specify drainage programs consistent with the crop & the soil type.	___	___	___	___	___	___	85008
9. Maintain organic matter level in the soil.	___	___	___	___	___	___	85009
10. Prepare soil for the crops to be grown.	___	___	___	___	___	___	85010
11. Maintain desirable soil tilth in the soils of the farm.	___	___	___	___	___	___	85011
12. Take soil samples to deliver to the soil testing laboratory.	___	___	___	___	___	___	85012
13. Choose appropriate tillage equipment for the kind of soil & the crops to be grown on the farm.	___	___	___	___	___	___	85013
Crop Program							
14. Choose appropriate varieties of each crop.	___	___	___	___	___	___	85014
15. Plant seeds and/or plants at appropriate rate & spacing in the row & in row width..	___	___	___	___	___	___	85015
16. Plant seeds and/or plants at appropriate depth.	___	___	___	___	___	___	85016

234

MICHIGAN STATE UNIVERSITY

Occupation: FARMING -- 85.1

CRITICAL INCIDENT

Job Knowledges:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment following high school graduation.

2. Please check each item in the knowledges list indicating the relative desirability of the item for the types of farming with which you are most familiar.

235

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: FARMING

JOB KNOWLEDGES	This Knowledge Is — Unnecessary	Desirable	Essential	Code
Must Understand:				
Soil Program				
1. Characteristics that determine land capability class.	___	___	___	85501
2. Factors which limit capability of soil.	___	___	___	85502
3. Relationship of land capability & type of farming which is appropriate.	___	___	___	85503
4. Relationship of land capability classes & crops which are appropriate.	___	___	___	85504
5. Optimum levels of NPK & minor elements for specific crops.	___	___	___	85505
6. Relative costs of various forms of plant nutrients (liquid, solid, gas).	___	___	___	85506
7. Relative rates of availability of various forms of plant nutrients (liquid, solid, gas).	___	___	___	85507
8. pH levels required by various crops for optimum production.	___	___	___	85508
9. Kinds of liming materials commonly available in the area.	___	___	___	85509
10. Effectiveness of various kinds of liming materials on the soils of the area.	___	___	___	85510
11. Relation of drainage to production of various crops of the area.	___	___	___	85511
12. Function of organic matter in the soil.	___	___	___	85512
13. Various methods of adding organic matter to the soil.	___	___	___	85513
14. Water requirements of crops commonly grown in the area.	___	___	___	85514
15. Methods of determining quantity of water needed to supplement natural rainfall for specified crops.	___	___	___	85515
16. Characteristics of a desirable seed bed for crops to be grown in the area.	___	___	___	85516
17. What tillage equipment & methods will result in a desirable seed bed.	___	___	___	85517
18. Factors affecting soil tilth.	___	___	___	85518
19. Depth from which to take samples for soil tests.	___	___	___	85519
20. The area to be represented by a specific soil sample.	___	___	___	85520
21. Characteristics of a composite soil sample.	___	___	___	85521
22. The effect of each kind of tillage equipment on soil.	___	___	___	85522
23. The soil properties that determine soil management groups & units.	___	___	___	85523
Crop Program				
24. The adaptability of crops to various soils of the area.	___	___	___	85524
25. The characteristics of various crop varieties.	___	___	___	85525
26. The most appropriate varieties for various soil types of the area.	___	___	___	85526
27. The seed treatments appropriate for seeds to be planted.	___	___	___	85527

236

MICHIGAN STATE UNIVERSITY

Occupation: ENVIRONMENTAL (ORNAMENTAL) HORTICULTURE -- 85.2 Code No. _____

NAME: _____ POSITION: _____

EMPLOYER: _____ TELEPHONE: _____

ADDRESS: _____
(Street) (City) (State) (Zip)

Number of years experience in occupation: _____

Number of hours in work week: _____ in work day: _____

CRITICAL INCIDENT

Job Skills:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment in Environmental (Ornamental) Horticulture following high school graduation.

2. Please check each item in the skills list indicating answers to the following:

   a) Is the item an entry level skill for a high school graduate?

   b) What is the degree of importance to a person engaged in environmental (ornamental horticulture?

Definitions:

Essential -- Of utmost importance; competence in performing this task is absolutely necessary for entry level employment.

Very Important -- Competence in performing this task has much influence or effect on entry level employability.

Some Importance -- Competence in performing this task has some influence on entry level employability.

Minor Importance -- Competence in performing this task has no effect on entry level employability.

Not Needed -- Task does not apply for entry level employment.

237

SPECIAL NOTE

1. Since there are several types of environmental horticulture businesses in Michigan we suggest you check the lists of skills and knowledges as they apply to the type(s) of environmental horticulture with which you are most familiar.

2. Please check below the type(s) of environmental horticulture business in which you are working:

Nursery Production	_____	Groundskeeping, parks, etc.	_____
Garden Center	_____	Arboriculture	_____
Bedding Plants	_____	Turf and Sprinkler	_____
Landscaping	_____	Other (specify)	_____
			_____

238

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

.CRITICAL INCIDENT ANALYSIS

Occupation: ENVIRONMENTAL (ORNAMENTAL) HORTICULTURE

JOB SKILLS	Relative Importance — Entry Skill	Not Needed	Minor Importance	Some Importance	Very Important	Essential	Code
Is able to:							
Propagation							
1. Bud graft.	___	___	___	___	___	___	85001
2. Make stem cuttings.	___	___	___	___	___	___	85002
3. Make root cuttings.	___	___	___	___	___	___	85003
4. Make cleft, whip, tongue, & side grafts.	___	___	___	___	___	___	85004
5. Select cutting & grafting stock.	___	___	___	___	___	___	85005
6. Store cutting & grafting stock.	___	___	___	___	___	___	85006
7. Line out rooted cuttings.	___	___	___	___	___	___	85007
8. Fertilize rooted cuttings.	___	___	___	___	___	___	85008
9. Prepare media for growing rooted cuttings.	___	___	___	___	___	___	85009
10. Sow seeds of plants.	___	___	___	___	___	___	85010
11. Provide suitable seed-bed for various seeds.	___	___	___	___	___	___	85011
12. Transplant seedlings.	___	___	___	___	___	___	85012
13. Adjust lighting for optimum growth of seedlings.	___	___	___	___	___	___	85013
14. Control temperature for optimum growth of seedlings.	___	___	___	___	___	___	85014
15. Control moisture for optimum growth seedlings.	___	___	___	___	___	___	85015
Arboriculture (Use & Care of Individual Trees)							
16. Identify trees & shrubs used for environmental purposes to species.	___	___	___	___	___	___	85016
17. Plant bare root trees & shrubs.	___	___	___	___	___	___	85017
18. Prepare balled trees.	___	___	___	___	___	___	85018
19. Plant balled trees.	___	___	___	___	___	___	85019
20. Plant trees & shrubs with tree spade.	___	___	___	___	___	___	85020
21. Prune transplanted trees & shrubs used for environmental purposes.	___	___	___	___	___	___	85021
22. Prune flowering trees & shrubs.	___	___	___	___	___	___	85022
23. Prune standard trees which are used for environmental purposes.	___	___	___	___	___	___	85023
24. Prune coniferous species which are used for environmental purposes.	___	___	___	___	___	___	85024
25. Fertilize trees & shrubs by various methods.	___	___	___	___	___	___	85025

MICHIGAN STATE UNIVERSITY

Occupation: ENVIRONMENTAL (ORNAMENTAL) HORTICULTURE -- 85.2

CRITICAL INCIDENT

Job Knowledges:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment following high school graduation.

2. Please check each item in the knowledges list indicating the relative desirability of the item for the types of farming with which you are most familiar.

240

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: ENVIRONMENTAL (ORNAMENTAL) HORTICULTURE

JOB KNOWLEDGES	This Knowledge Is — Unnecessary	Desirable	Essential	Code
Must understand:				
Propagation				
1. Proper time to make bud grafts.	___	___	___	85501
2. Kinds of cuttings.	___	___	___	85502
3. Environmental conditions needed for successful cuttings & grafts both before & after the process.	___	___	___	85503
4. Media needed for growing rooted cuttings.	___	___	___	85504
5. Effect of intensity of light on growing cuttings.	___	___	___	85505
6. Effect of hours of light on growing cuttings.	___	___	___	85506
7. Appropriate seeding conditions for various kinds of seeds.	___	___	___	85507
8. Appropriate media for growing seedlings.	___	___	___	85508
9. How to control growth of plants through lighting.	___	___	___	85509
10. Effects of temperature on growth of seedlings.	___	___	___	85510
11. Characteristics of seedlings which indicate quality.	___	___	___	85511
12. Effects of mositure on optimum growth of seedlings.	___	___	___	85512
Arboriculture (Use & Care of Individual Trees)				
13. Basic tree functions especially related to planting & pruning of trees & shrubs.	___	___	___	85513
14. Soil characteristics related to growth of trees & shrubs.	___	___	___	85514
15. Fertilizer labeling.	___	___	___	85515
16. Responses of trees & shrubs to specific planting methods.	___	___	___	85516
17. Needs for pruning of trees & shrubs.	___	___	___	85517
18. Timing of pruning of trees & shrubs.	___	___	___	85518
19. Pruning tools.	___	___	___	85519
20. Pruning safety practices.	___	___	___	85520
21. Fertilization methods for trees & shrubs.	___	___	___	85521
22. Fertilization timing for trees & shrubs.	___	___	___	85522
23. Environmental relationships of grass & trees.	___	___	___	85523
24. Wound healing in trees.	___	___	___	85524
25. Tree wound dressings.	___	___	___	85525
26. Tools for cavity & wound treatment.	___	___	___	85526
27. Disease control methods for trees & shrubs.	___	___	___	85527
28. Insect control methods for trees & shrubs.	___	___	___	85528

MICHIGAN STATE UNIVERSITY

Date Completed _____

Occupation: FARM IMPLEMENT REPAIR -- 85.3

Code No. _____

NAME: _____ POSITION: _____

EMPLOYER: _____ TELEPHONE: _____

ADDRESS: _____
(Street) (City) (State) (Zip)

Number of years experience in occupation: _____

Number of hours in work week: _____ in work day: _____

CRITICAL INCIDENT

Job Skills:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment in Farm Implement Repair following high school graduation.

2. Please check each item in the skills list indicating answers to the following:

   a) Is the item an entry level skill for a high school graduate?

   b) What is the degree of importance to a person engaged in farm implement repair?

Definitions:

Essential -- Of utmost importance; competence in performing this task is absolutely necessary for entry level employment.

Very Important -- Competence in performing this task has much influence or effect on entry level employability.

Some Importance -- Competence in performing this task has some influence on entry level employability.

Minor Importance -- Competence in performing this task has no effect on entry level employability.

Not Needed -- Task does not apply for entry level employment.

242

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: FARM IMPLEMENT REPAIR

JOB SKILLS	Relative Importance — Entry Skill	Not Needed	Minor Importance	Some Importance	Very Important	Essential	Code
Is able to:							
Farm Power							
1. Identify diesel fueled internal combustion engine.	___	___	___	___	___	___	85001
2. Identify gasoline fueled internal combustion engine	___	___	___	___	___	___	85002
3. Identify 4-stroke cycle engine.	___	___	___	___	___	___	85003
4. Identify 2-stroke cycle engine.	___	___	___	___	___	___	85004
5. Check & clean (or replace) the filters in the fuel line of a gasoline fueled engine.	___	___	___	___	___	___	85005
6. Clean the carburetor of a gasoline fueled engine.	___	___	___	___	___	___	85006
7. Adjust the carburetor of a gasoline fueled engine.	___	___	___	___	___	___	85007
Tools							
8. Identify hand & power tools commonly used for farm implement repair.	___	___	___	___	___	___	85008
9. Correctly use hand & power tools commonly found in the farm implement repair shop.	___	___	___	___	___	___	85009
10. Observe & follow safety practices when working in the farm machinery repair shop.	___	___	___	___	___	___	85010
Welding							
11. Set & adjust the controls on the oxy-acetylene welding equipment commonly found in the farm implement repair shop & for the kind of job to be done.	___	___	___	___	___	___	85011
12. Set & adjust the controls on the arc welding equipment commonly found in the farm implement repair shop & for the kind of job to be done.	___	___	___	___	___	___	85012
13. Select appropriate welding rods for the kind of job to be done.	___	___	___	___	___	___	85013
14. Prepare metal for welding.	___	___	___	___	___	___	85014
15. Perform the kind and/or position welds commonly needed for repair of farm implements.	___	___	___	___	___	___	85015

243

MICHIGAN STATE UNIVERSITY

Occupation: FARM IMPLEMENT REPAIR -- 85.3

CRITICAL INCIDENT

JOB KNOWLEDGES:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment following high school graduation.

2. Please check each item in the knowledge list indicating the relative desirability of the item for Farm Implement Repair.

244

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: FARM IMPLEMENT REPAIR

JOB KNOWLEDGES	This Knowledge Is — Unnecessary	Desirable	Essential	Code
Must understand:				
Farm Power				
1. Basic principles of operation of compression ignition engines.	___	___	___	85501
2. Basic principles of operation of spark ignition engines.	___	___	___	85502
3. Basic differences between diesel & gasoline fueled engines.	___	___	___	85503
4. Advantages & common agricultural uses of the various types of engines.	___	___	___	85504
5. The specifications (directions) in the manual for cleaning and/or replacing filters in the fuel line of a gasoline fueled engine.	___	___	___	85505
6. The specifications (directions) in the manual for cleaning and/or adjusting the carburetor of a gasoline fueled engine.	___	___	___	85506
Tools				
7. The kind & purpose of hand & power tools commonly found in the farm implement repair shop.	___	___	___	85507
8. The sizes & units of measurement of tools commonly used in the farm implement repair shop.	___	___	___	85508
9. The measuring instruments commonly used in the farm implement repair shop.	___	___	___	85509
10. The safety practices to be followed when using hand or power tools in the farm implement repair shop.	___	___	___	85510
Welding				
11. The purpose of the controls on the oxy-acetylene welder.	___	___	___	85511
12. The purpose of the controls on the arc welder.	___	___	___	85512
13. The appropriate size & kind of rod for specified welding jobs.	___	___	___	85513
14. The condition of metal needed for satisfactory welds on farm equipment.	___	___	___	85514
15. The appropriate kind of welds commonly needed on farm equipment.	___	___	___	85515
16. The use of tables & charts used in connection with welding jobs.	___	___	___	85516
17. Settings of arc welder (amperage, voltage, polarity).	___	___	___	85517
18. Polarity, direct & alternating current.	___	___	___	85518
19. Safety practices for the welder.	___	___	___	85519
20. Safety practices to equipment when welding (fires, damage to buildings, livestock, etc.).	___	___	___	85520
21. The effect of heat on metals.	___	___	___	85521
22. The characteristics of a satisfactory weld.	___	___	___	85522

245

MICHIGAN STATE UNIVERSITY

Occupation: AGRICULTURAL & BIOLOGICAL TECHNICAL SERVICES -- 85.4 Code No. _____

NAME: _____ POSITION: _____

EMPLOYER: _____ TELEPHONE: _____

ADDRESS: _____
(Street) (City) (State) (Zip)

Number of years experience in occupation: _____

Number of hours in work week: _____ in work day: _____

CRITICAL INCIDENT

Job Skills:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment into the Agricultural and Biological Technical Services following high school graduation.

2. Please check each item in the skills list indicating answers to the following:

   a) Is the item an entry level skill for a high school graduate?
   b) What is the degree of importance to a person engaged in agricultural biology?

Definitions:

Essential -- Of utmost importance; competence in performing this task is absolutely necessary for entry level employment.

Very Important -- Competence in performing this task has much influence or effect on entry level employability.

Some Importance -- Competence in performing this task has some influence on entry level employability.

Minor Importance -- Competence in performing this task has no effect on entry level employability.

Not Needed -- Task does not apply for entry level employment.

SPECIAL NOTE

1. Since there are many types of agricultural and biological technical services we suggest you check the lists of skills and knowledges as they apply to the type(s) of technical services with which you are familiar.

2. Please check the type(s) of technical services in which you have had experience:

Food Processing	____	Grain, Feed, and Seed Services	____
Animal Laboratories	____	Waste Disposal	____
Agricultural Chemicals	____	Other (specify)	_____
Water Resources	____		_____

247

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: AGRICULTURAL & BIOLOGICAL TECHNICAL SERVICES

JOB SKILLS	Relative Importance — Entry Skill	Not Needed	Minor Importance	Some Importance	Very Important	Essential	Code
Is able to: Animal--domestic farm animals or birds, zoo animals or birds, laboratory animals or birds							
1. Approach, handle, & work with live animals to prevent personal injury.	___	___	___	___	___	___	85001
2. Approach, handle, & work with live animals & birds in a humane way.	___	___	___	___	___	___	85002
3. Diplomatically approach people when enforcing laws & regulations.	___	___	___	___	___	___	85003
4. Clean & sterilize laboratory glassware, equipment, & instruments used in administering prescribed medicines & treatments to animals & birds.	___	___	___	___	___	___	85004
5. Prepare & read the results of bacteria & mold cultures.	___	___	___	___	___	___	85005
6. Take blood samples.	___	___	___	___	___	___	85006
7. Perform blood testing procedures.	___	___	___	___	___	___	85007
8. Maintain breeding records of animals & birds.	___	___	___	___	___	___	85008
9. Recognize early signs of abnormal health conditions in animals & birds.	___	___	___	___	___	___	85009
10. Administer medication as prescribed.	___	___	___	___	___	___	85010
11. Dehorn animals when needed.	___	___	___	___	___	___	85011
12. Castrate animals.	___	___	___	___	___	___	85012
13. Dock lambs & remove tails from pigs.	___	___	___	___	___	___	85013
14. Formulate rations as directed.	___	___	___	___	___	___	85014
15. Observe animals for heat & signs of parturition.	___	___	___	___	___	___	85015
16. Assist animals in parturition.	___	___	___	___	___	___	85016
17. Treat newborn animals to prevent infection.	___	___	___	___	___	___	85017
18. Assist newborn animals to nurse.	___	___	___	___	___	___	85018
19. Give animals or birds prescribed injections to prevent diseases & nutritional deficiencies.	___	___	___	___	___	___	85019
20. Remove needle teeth of young pigs.	___	___	___	___	___	___	85020
21. Shear sheep.	___	___	___	___	___	___	85021

248

MICHIGAN STATE UNIVERSITY

Occupation: AGRICULTURAL & BIOLOGICAL TECHNICAL SERVICES -- 85.4

CRITICAL INCIDENT

Job Knowledges:

1. A critical incident is a skill or a knowledge needed (desirable) for entry level employment following high school graduation.

2. Please check each item in the knowledges list indicating the relative desirability of the item for an Agricultural Biology Technician.

MICHIGAN STATE UNIVERSITY
AGRICULTURAL EDUCATION

CRITICAL INCIDENT ANALYSIS

Occupation: AGRICULTURAL & BIOLOGICAL TECHNICAL SERVICES

JOB KNOWLEDGES	This Knowledge Is — Unnecessary	Desirable	Essential	Code
Must understand: Animal: domestic farm animals or birds, zoo animals or birds, laboratory animals or birds				
1. The temperament of the animals or birds being studied.	___	___	___	85501
2. The correct way to approach animals or birds.	___	___	___	85502
3. The correct use of restraining techniques & devices.	___	___	___	85503
4. The use of protective devices.	___	___	___	85504
5. The necessary precautions to take in handling animals or birds suspected of disease or sickness.	___	___	___	85505
6. Which diseases are communicable to man & by what methods.	___	___	___	85506
7. The limit of stress for the animal or bird being handled.	___	___	___	85507
8. The laws & regulations governing the care & treatment of animals & birds.	___	___	___	85508
9. Different ways people may react when informed of violations of laws or regulations regarding animals & birds.	___	___	___	85509
10. The importance of obtaining cooperation without the use of threats or the force of the law.	___	___	___	85510
11. The need for clean & sterilized laboratory equipment.	___	___	___	85511
12. The materials & techniques used in cleaning & sterilizing glassware & equipment.	___	___	___	85512
13. Materials used in making laboratory cultures.	___	___	___	85513
14. Techniques used in making laboratory cultures.	___	___	___	85514
15. How to determine & record results of laboratory cultures.	___	___	___	85515
16. The basic anatomy & physiology of the animal or bird being worked with.	___	___	___	85516
17. How to preserve blood samples.	___	___	___	85517
18. Exact procedure to perform tests being made.	___	___	___	85518
19. How to record & interpret observations of tests made.	___	___	___	85519
20. Importance of maintaining accurate breeding records.	___	___	___	85520
21. Methods of recording data related to breeding, production, health, & reaction of animals or birds.	___	___	___	85521
22. How to prepare breeding certificates & applications for registration papers.	___	___	___	85522
23. Normal health behavior of animals or birds.	___	___	___	85523

250

APPENDIX B

LIST OF PROJECT ADVISORY COUNCIL MEMBERS

Names, Titles, and Addresses of Advisory Council Members

Dr. Lee O. Baker, Chairman
Agriculture Department
Western Michigan University
Kalamazoo, Michigan 49001

Mr. Steven Bolen, Co-Owner/Mgr.
Weaver and Ling, Inc.[a]
South Centerville Road
Sturgis, Michigan 49091

Mr. Norwin Braun, Teacher of
Vocational Agriculture
Chesaning Union High School
850 North Fourth Street
Chesaning, Michigan 48616

Mr. Grant Fettig, Teacher of
Vocational Agriculture
Grant High School
State Street
Grant, Michigan 49327

Mr. Clifford Jump, Principal
Calhoun Area Skill Center
475 East Roosevelt
Battle Creek, Michigan 49017

Mr. Ted Myers, Vice-President
Cottage Gardens, Inc.[b]
South Waverly Road
Lansing, Michigan 48910

Mr. Ray Moriartey, Superintendent
Marlette Community Schools
3051 Moore Street
Marlette, Michigan 48453

Mr. Elton R. Smith, President
Michigan Farm Bureau
7373 West Saginaw
Lansing, Michigan 48917

Mr. Benjamin Standen
Dean for Technologies
Lake Michigan College
711 Britain Street
Benton Harbor, Michigan 49022

Mr. E. A. Wenner, Secretary-Manager
Michigan Agricultural Conference
921 North Washington
Lansing, Michigan 48906

---

[a]Retail Farm Machinery Dealership.

[b]Wholesale Nursery.

APPENDIX C

TEACHERS OF AGRICULTURE WHO ASSISTED IN COLLECTION OF FIELD DATA

CE 008 668

CE 008 452

Names and School Addresses of Teachers Who Assisted

Mr. Richard Barnes
Merrill High School
555 West Alice Street
Merrill, Michigan 48637

Mr. Raymond J. Clark
Grand Ledge High School
225 West Kent Street
Grand Ledge, Michigan 48837

Mr. Frank Corrin
Corunna High School
Comstock Street
Corunna, Michigan 48817

Mr. Grant Fettig
Grant High School
State Street
Grant, Michigan 49327

Mr. Ronald Hesche
Hamilton Community School
136th Street
Hamilton, Michigan 49419

Mr. David Keller
South Lyon High School
61526 West Nine Mile
South Lyon, Michigan 48178

Mr. Marlin King
Colon Community Schools
606 Dallas Street
Colon, Michigan 49040

Mr. Joe V. Klier
Southeast Oakland Vo-Ed Center
5055 Delemere
Royal Oak, Michigan 48073

Mr. Russell Latchaw
Fennville High School
North Maple Street
Fennville, Michigan 49408

Mr. James LeCureaux
Ubly High School
2020 Union Street
Ubly, Michigan 48475

Mr. Keats Rasmussen
Central Montcalm High School
1480 South Sheridan Road
Stanton, Michigan 48888

Mr. Stephen E. Sapp
(No school)
1646I Spartan Village
East Lansing, Michigan 48823

Mr. Robert J. Thomas
Hartford High School
208 East Main
Hartford, Michigan 49029

Mr. Jacob G. Venema
Blissfield High School
630 South Lane Street
Blissfield, Michigan 49228